h. The friendly element will initiate maneuvering line numbers no closer than 200 ft between friendly aircraft. Upon first indication of the bandit the friendly element will maneuver to maintain at least 500 ft of separation from all aircraft during the engagement, including aircraft within the same element. Minimum aircraft separation during pre-briefed tail chase maneuvers in DACM is 200 ft.

4. DCM

a. DCM consists of two types of events:

(1) 2 Tiltrotor v 1 RW.

(2) 2 Tiltrotor v 1 FW.

b. DCM Aircrew Requirements

(1) When all crewmembers of a flight are DCM qualified, the flight does not require a DCMI.

(2) Minimum crew requirements shall be IAW the applicable T&R syllabus.

(3) A non-DCM qualified pilot may participate in DCM training, provided the Tiltrotor Aircraft Commander is a designated DCMI. A non-DCM qualified aircrew serving in the cabin section may participate in DCM training, provided the other aircrew serving in the cabin section is a designated DCMI.

c. Minimum tiltrotor altitude is 200 ft AGL.

313. ROC FOR FORWARD AIR CONTROL (AIRBORNE) OPERATIONS FAC(A)

1. General

a. Purpose. To standardize the training rules for all USMC aircraft conducting FAC(A) training and ensure compliance with the most recent version of the Joint Close Air Support Action Plan Memorandum of Agreement, Joint Forward Air Controller (Airborne) [As of this publication date, JCAS AP MOA 2004-02, JFAC(A), 24 March 2005; referred to as the 'JFAC(A) MOA' for brevity sake].

b. Scope. This section stipulates training criteria and ROC peculiar to FAC(A) operations.

c. Safety. Squadrons conducting FAC(A) operations shall operate within the guidelines of this chapter. Commanders shall ensure aircrew conducting FAC(A) training are properly qualified and appropriate flight leadership is represented within the flight.

d. FAC(A) Qualifications. Aircrew achieve the FAC(A) qualification by completing the specified requirements as delineated in individual T&R syllabi and the requirements delineated in the JFAC(A) MOA. Aircrew undergoing initial FAC(A) qualification training require supervision of a FAC(A) instructor [FAC(A)I].

2. When supervising unqualified individuals, the supervising FAC(A) or FAC(A)I shall be in the same section/flight element as the unqualified aircrew. The supervising FAC(A) or FAC(A)I shall maintain a position to observe the training operation, and if required, assume control of the training operation, immediately "ABORT" the control, and/or "CHECK FIRE" supporting arms as appropriate.

3. When a FAC(A) or FAC(A)I is operating in a supervisory role, both the unqualified individual and the supervising FAC(A)/FAC(A)I may log the same controls that the unqualified aircrew conducts and logs.

4. JCAS AP MOA JFAC(A). Units conducting FAC(A) training shall comply with JFAC(A) MOA requirements.

a. JFAC(A) MOA 'currency'/'proficiency' definitions are not the same as Aviation T&R Program 'currency'/'proficiency' definitions and are unique to the FAC(A) qualification.

b. The JFAC(A) MOA definitions and requirements as of this publication date are as follows [following list is not all-inclusive; see JFAC(A) MOA for comprehensive policy]:

(1) FAC(A) Training Definitions:

(a) Certified - individuals who satisfactorily complete the appropriate service academic and practical training requirements of a core FAC(A) training curriculum and complete a comprehensive assessment may be granted FAC(A) certification.

(b) Qualified - a certified FAC(A) who has maintained currency by achieving the established minimum recurring training and assessment requirements in a specific aircraft type/model/series.

(c) Control - consists of at least one aircraft attacking a surface target. The control begins with a CAS briefing (the 9-line is the JP 3-09.3 standard) from a FAC(A) and ends with either an actual/simulated weapons release or an abort on a final attack run. No more than two controls can be counted per CAS briefing per target.

(2) To be certified as a FAC(A), the individual must conduct a minimum of 12 controls (8 Type I)*. Four of these controls must have CAS asset expend live or training ordnance**. One of the 12 controls must be conducted at night***. Upon successful completion of a comprehensive evaluation, the individual may be granted a FAC(A) certification.

(3) Proficiency will be maintained by controlling a minimum of 6 controls in a six-month period (4 of these 6 controls must be Type I, 1 control must be at night***, and at least 1 must control an asset that expends ordnance**).

(4) Currency will be maintained by conducting a minimum of 2 controls every 90 days. Failing to meet either proficiency or currency minimum requirements will result in a FAC(A) being non-qualified. FAC(A)s will satisfy their currency requirements with ground units or TACPs whenever possible.

(5) Failing to meet either proficiency or currency minimum requirements

* A minimum of 8 of the controls must be fixed-wing.

** If units are precluded from completing requisite training due to local, host nation, or range restrictions, those portions of certification may be waived until the unit returns to CONUS or deploys to suitable environment.

*** Units deployed to or stationed at extreme latitudes (>49 deg) may waive the night control for certification until return to home station where night sorties can be executed. If units are precluded from completing requisite training due to local, host nation, or range restrictions, those portions of certification may be waived until the unit returns to CONUS or deploys to suitable environment.

will result in a FAC(A) being non-qualified. To regain qualification, a FAC(A) must complete a requalification program IAW Service Directives that addresses the shortfalls from the previous six months. FAC(A)s who are unqualified for 18 consecutive months must regain qualification by completing a Service approved refresher syllabus and a minimum of 6 controls (4 Type I, one of the six at night***, and at least 1 controlling an asset expending ordnance**). Upon successful completion of a comprehensive re-qualification, the individual will be re-qualified as a FAC(A).

5. Loss of FAC(A) Qualification

a. Failure to meet JFAC(A) MOA proficiency or currency requirements, or loss of proficiency (delinquent refly factor) for all associated FAC(A) qualification events [per paragraph 215.2.a], constitutes loss of the FAC(A) qualification.

b. FAC(A) Requalification

(1) Aircrew who have lost the FAC(A) qualification due to failure to meet JFAC(A) MOA Proficiency or Currency requirements shall regain the FAC(A) qualification by successfully completing events as delineated in the appropriate T&R syllabus under the supervision of a qualified FAC(A). At a minimum, such aircrew must complete the number and category (appropriate night, control type, ordnance, etc.) of controls the individual failed to accomplish during the appropriate Currency or Proficiency period (Currency - 2 controls in 90 days. Proficiency - 6 controls in a six month period; 4 of these 6 controls must be Type I, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

(2) Aircrew who have lost the FAC(A) qualification due to loss of proficiency (delinquent refly factor) for all associated FAC(A) qualification events [per paragraph 202.8.b.(1)], or who have been FAC(A) unqualified for 18 consecutive months per the JFAC(A) MOA, shall regain qualification by completing the appropriate Refresher FAC(A) syllabus under the supervision of a FAC(A)I and conduct a minimum of 6 controls (4 of these 6 controls must be Type I, 1 control must be at night, and at least 1 must control an asset that expends ordnance).

6. FAC(A) Documentation

a. Units shall maintain aircrew FAC(A) qualification letters, FAC(A)I designations letters, FAC(A) event ATFs, and FAC(A) academic training courses completed in Individual Performance Records per Chapter 2.

b. Units shall maintain a record of controls for all aircrew conducting FAC(A) training. At a minimum, the following information shall be included in the record of controls: 1) Date of controls; 2) Number of controls; 3) Type of control; 4) Day or night; 5) Ordnance used or simulated; 6) Type of aircraft controlled (fixed or rotary wing). The CAS log contained in the JFAC(A) MOA is the recommended format to record controls. (See Figure 3-1)

FORWARD AIR CONTROLLER (AIRBORNE) MISSION LOG FOR JOHN Q. PUBLIC								
DATE	RANGE NAME AND LOCATION	NUMBER AND A/C TYPE	TYPE OF ORDNANCE	NUMBER OF CONTROLS	TYPE OF CONTROL/ DAY/NIGHT*	CONTROLLER'S SIGNATURE	SUPERVISOR'S INITIALS	REMARKS
02 Feb 2001	Coleman, Ft Bragg NC	2 x A-10s	30MM MK-82	1	1/IR/N			
28 Feb 2001	Manchester, Ft Bragg NC	2 x F-16s	Dry	4	2/-/D			
10 Mar 2001	Shoal Creek, Ft Hood TX	2 x A-10s	BDU-33	2	1/LD/D			
22 Mar 2001	Coleman, Ft Bragg NC	2 x A-10s	AGM-65B	1	1/LD/N			

*This column should be completed in the following order: Type of Control/Type of Mark/Day or Night Mission. Controls: Type 1 Control = 1, Type 2 Control = 2, Type 3 Control = 3; Marks: Laser Designation = LD, IR = IR, White Phosphorous = WP, Red Phosphorous = RP, Illume = IL, Indirect Fire or Artillery = IF, No Mark = NA, Direct Fire = DF, Talk On = TO; Day = D and Night = N. Example: a Type 1 CAS mission using illume on deck during the daytime would be annotated as 1/IL/D.

Figure 3-1.--FAC(A) CAS Mission Log.

CHAPTER 4

CORE SKILL INTRODUCTION TRAINING

FIGURES

CHAPTER 4

CORE SKILL INTRODUCTION TRAINING

400. CORE SKILL INTRODUCTION TRAINING OVERVIEW

1. Definitions. Core Skill Introduction training consists of 1000 phase T&R training. Core Skill Introduction Basic POI training includes system/equipment operation familiarization, initial crew procedures, and initial exposure to Core Skills. Core Skill Introduction Refresher POI training include fundamental aircraft/system re-familiarization training. Core Skill Introduction Series Conversion POI training includes fundamental training required to fly/operate a new model/series aircraft/system that has significantly different aircraft or weapons systems characteristics. Core Skill Introduction Transition POI training includes fundamental training required to fly/operate a new type aircraft/system.

2. Marine Corps Fleet Replacement Squadrons (FRS), aviation ground formal schools, civilian aviation schools, and CMC designated operational commands conduct Core Skill Introduction training per community T&R manuals.

3. Personnel should be scheduled to complete 1000 Phase T&R events in sequential order to the greatest extent possible.

4. Commands responsible for overseeing Core Skill Introduction training shall provide a training environment where other billet responsibilities do not detract from that training.

5. Core Skill Introduction Training Waivers/Deferments

a. Waived Syllabus Events. A commanding officer of an FRS/Core Skill Introduction training unit may waive one event for Transition/Model Conversion/Series Conversion individuals or individuals assigned to Refresher POIs when, in the CO's judgment, the previous experience or performance of an individual satisfies the requirement of the particular event. Basic T&R events shall not be waived for initial accession personnel. Waived events must be annotated in the IPR. Waivers for multiple events or complete stages of training shall be submitted via message to CG TECOM (ATB) for review and authorization.

b. Deferred Syllabus Events. A commanding officer of an FRS/Core Skill Introduction training unit may defer one event for a student to operational units when, in the CO's judgment, a lack of a logistic support or training assets requires temporary exemption. Deferral of multiple events and/or complete stages of training require authorization from CG TECOM ATB. Gaining operational units must complete deferred training events in strict compliance with T&R event requirements. Training or NATOPS Officers shall annotate all deferred events in the IPR prior to the individual's transfer.

NOTE

The remaining paragraphs of this chapter pertain only to aircrew (remaining chapter policy is not applicable to aviation ground personnel).

401. AIRCREW CORE SKILL INTRODUCTION PRODUCTION PROCESS

1. Annual Core Skill Introduction Production Cycle

a. Training Capacity. Training squadrons calculate and submit estimated annual training capacities for subsequent fiscal years to Aviation Training Branch (ATB), Training and Education Command (TECOM) NLT 30 June. CG TECOM (ATB) validates and approves training capacity estimates.

b. Training Requirements. CG TECOM (ATB) consolidates all Marine Corps annual Core Skill Introduction training requirements from appropriate agencies and submits them to DC Aviation Plans and Policies (APP) and the Office of the Chief of Naval Operations (OPNAV) NLT 15 July. OPNAV publishes Navy and Marine Corps aviation training production requirements in the Naval Aviation Training Requirements Letter (TRL) NLT 31 July.

c. Aviator Production Plan. Chief of Naval Aviation Training (CNATRA), FRSs, CG TECOM (ATB), OPNAV, and BUPERS work together to develop the Integrated Production Plan (IPP) which defines the planned monthly input and output for every phase of Naval Aviator and Enlisted Aircrew production, API through FRS. The IPP is released NLT 1 October and is updated throughout the year.

d. Execution. The training units execute Core Skill Introduction training IAW the IPP throughout the fiscal year.

e. Assessment. CNATRA, CG TECOM (ATB), and Task Groups (Tactical, NFO, Rotary, Multi-Engine, Primary, and Enlisted Aircrew) conduct analysis of how the production process at each phase of Naval Aviator training is progressing via monthly, quarterly, and semi-annual meetings and conferences throughout the year.

2. Naval Aviation Production Process

a. The Naval Aviation Production Process (NAPP) is a Chief of Naval Operations (CNO) initiated program designed to improve the process of producing first tour Naval Aviators (NA), Naval Flight Officers (NFO), and Naval Aircrew (NAC) by targeting extended Time-To-Train (TTT) and identifying and removing barriers to production. NAPP is established and defined in OPNAVINST 3500.31 and in the NAPP SOP.

(1) TECOM(ATB) NAPP Representation. CG TECOM (ATB) shall remain actively engaged in the NAPP providing USMC representation in all Task Groups (TGs). CG TECOM (ATB) provides a unified USMC position to Commander, Naval Air Forces (CNAF) and CNATRA regarding NAPP issues.

(2) Wing NAPP Representation. Respective Wing Commanders shall appoint an officer as the Wing NAPP Representative to serve as a liaison between CG TECOM (ATB) and the FRS and to serve in the Production Planning Factor (PPF) validation/approval chain.

(3) Squadron NAPP Representation. Each FRS or designated Core Skill Introduction training unit shall appoint both an officer and an enlisted aircrewman (as appropriate) as squadron NAPP Representatives. Squadron NAPP representatives are responsible for: NAPP Integrated Production Data Repository (NIPDR) inputs; PPF development and submission; representation at monthly TG meetings and semi-annual Production Alignment Conferences (PAC); and other issues relating to the NAPP.

b. The Naval Aviation Production Team (NAPT) is chartered by CNAF and chaired by CNATRA to oversee NAPP efforts that cover the entire process from "street to

Fleet." The NAPT consists of all stakeholders that contribute to the production of Naval Aviators and Naval Aircrew; stakeholders include Navy Headquarters representatives, OPNAV, CG TECOM (ATB), MATSGs, and TGs representing each aviation community (primary, rotary, maritime, tactical, NFO, and Naval Aircrew). The FRSs play a key role in the NAPT as members of their respective TGs.

3. Command Relationships

a. CMC allocates aircraft, material, and personnel to meet current and anticipated long range USMC training requirements. CMC (MMOA-2) will staff FRS flight instructor billets to the ASR. The optimum tour for a flight instructor is 36 months. CMC (MMOA-2) regards all tour lengths shorter than 24 months as an exception to this policy.

b. CG TECOM is responsible for managing training and education requirements of the Total Force.

(1) ATB is responsible for managing Core Skill Introduction training policy and requirements, tasking FRSs with training requirements, coordinating class schedules and seats in Marine Corps Training Information Management System (MCTIMS), and monitoring Core Skill Introduction training progression. CG TECOM (ATB) is the approval authority for FRS training. Operational units shall submit requests for Core Skill Introduction training by message. CG TECOM (ATB) serves as an advocate for FRSs, aviation ground/MACCS schools, and CMC designated operational commands conducting Core Skill Introduction training. As such, FRSs have been granted DIRLAUTH with CG TECOM (ATB) regarding all training matters.

(2) MATSGs support ATB by locally monitoring issues affecting USMC aviation training and providing face-to-face liaison with CNATRA. Responsibilities include promoting Marine Corps Aviation interests as representatives to CNATRA, serving as Marine Corps advocates at Navy FRSs, monitoring CNATRA production to meet FRS requirements, and acting as the conduit for FRS inputs to CNATRA Curriculum Review Boards.

c. MARFOR commanders support CG TECOM (ATB) for Core Skill Introduction training.

d. Wing Commanders have OPCON of subordinate FRSs and are responsible directly to their respective MARFOR commanders for execution of Core Skill Introduction training responsibilities.

(1) Wing Commanders are responsible for ensuring FRSs and designated operational commands under their authority receive the necessary support and assets to accomplish their training mission.

(2) Wing Commanders shall not task FRSs with flights/requirements that do not contribute to student training. Examples of these types of flights include the following: demonstration flights, staff flight time, static displays, VIP/administrative/logistic flights, and certain wing FRAGs. Any additional tasking that could impact an FRS's ability to make its annual training mission shall be requested via DMS message to CG TECOM (ATB).

e. Group Commanders shall provide FRSs with local maintenance and supply support on an equal basis with co-located operational squadrons.

(1) Commands responsible for overseeing Core Skill Introduction training shall provide a training environment where other billet responsibilities do not

detract from that training. Individuals undergoing 1000 phase training should not be assigned unit T/O billet responsibilities or collateral duties until such training is complete.

(2) Commanders of operational squadrons conducting Core Skill Introduction training shall balance 1000 phase training responsibilities with operational responsibilities. Core Skills Introduction training will normally receive priority during peacetime operations.

(3) CMC designated operational commands authorized to conduct aircrew Core Skill Introduction training are as follows:

(a) MAG-24. MAG-24 is authorized to conduct CH-53E to CH-53D Series Conversion and CH-53D Refresher Core Skill Introduction training per the CH-53 T&R Manual.

(b) HMLA-773. HMLA-773 is authorized to conduct AH-1W and UH-1N Refresher Core Skill Introduction training per the AH-1W and UH-1N T&R Manuals.

(c) VMFT-401. VMFT-401 is authorized to conduct F-5 Basic (Conversion) and Refresher Core Skill Introduction training per the F-5 T&R Manual.

(d) VMGR-152. VMGR-152 is authorized to conduct KC-130F/R and KC-130J Basic, Series Conversion, and Refresher Core Skill Introduction training per the KC-130F/R/T and KC-130J T&R Manual.

(e) VMGR-252, VMGR-352. VMGR-252 and VMGR-352 are authorized to conduct KC-130J Basic, Series Conversion, and Refresher Core Skill Introduction training per the KC-130J T&R Manual.

(f) VMGR-234, VMGR-452. VMGR-234 and VMGR-452 are authorized to conduct KC-130T Basic, Series Conversion, and Refresher Core Skill Introduction training per the KC-130F/R/T T&R Manual.

(g) VMX-22. VMX-22 is authorized to conduct MV-22 Basic, Transition, and Refresher Core Skill Introduction training per the MV-22 T&R Manual.

(4) CMC has authorized contract vendors to conduct Operational Support Aircraft (OSA) aircrew Core Skill Introduction training.

402. FRS TRAINING CAPACITY

1. Proper management of Marine Corps aviation production requires that CG TECOM (ATB) continually reconcile FRS training requirements with FRS training capacity. Total training capacity of a squadron is calculated in terms of total numbers of Basic POI students a squadron can train per year, assuming the squadron only has to produce Basic POI students. CG TECOM (ATB) utilizes two methods to calculate training capacity at an FRS: the Replacement Aircrew (RAC) Equivalency Model and Production Planning Factors (PPFs). Although originally derived from the RAC Equivalency Model, it must be understood that the term RAC Equivalent (RE) is used in both the RAC Equivalency Model and PPFs to define capacity. The term RAC Equivalent means one complete Basic POI. If a squadron has a total capacity of 30 Basic POI students per year, then the squadron's capacity is 30 RE. To compute RE in PPFs, the CAT II-V requirements must be set to zero and only CAT I requirements entered. The comparative capacity of a squadron in terms of the other POIs will be covered in paragraph 402.2.

a. RAC Equivalency Model. The RAC Equivalency Model can be utilized to estimate FRS training capacity based solely on average aircraft assigned and average monthly utilization rate.

(1) Total Flight Hours per RAC Equivalent. The sum of the T&R 100 level Basic POI hours and an overhead factor (usually about 20 percent of the syllabus hours) define the total flight hours per RAC equivalent. The overhead factor is a "cost of doing business" included to allow for required flights to conduct FRS training. Overhead flights include: IUT flights, incomplete flights, instructor NATOPS/instrument certifications, warm-up flights, post maintenance flights, ferry flights, and student syllabus refly. For example, if the total Basic syllabus hours equal 100, the total flight hours per RAC equivalent may be 120 hours (100 x 1.2). Actual Squadron overhead rates are contained in the Syllabus Overhead Allowance and Attrition Rates Letter released annually by OPNAV.

(2) Average Aircraft Assigned. Average aircraft assigned is the average number of aircraft expected to be in an "A" status for the year.

(3) Planned Aircraft Utilization Factor. The planned aircraft utilization factor is the number of hours a squadron plans to fly each aircraft per month, based on historical data, parts, and maintenance personnel available. WSPD and/or OP-20 limited utilization factors are not applicable.

(4) Training Capacity. FRS training capacity (estimated in terms of RAC Equivalency) can be determined by multiplying the average aircraft assigned, the monthly utilization factor, and 12 months (the product equals the estimated total annual flight hours for the squadron), then by dividing this product by the total flight hours per RAC equivalent. If the FRS average number of aircraft assigned is 10 and the planned utilization factor is 30 hours (using 12 months) the product is 3600 (10 x 30 x 12). Dividing 3600 by the total flight hours per RAC equivalent (i.e., 120 hours from paragraph (1) above) yields the FRS training capacity of 30 RE (3600/120 = 30).

b. Production Planning Factors (PPF)

(1) Where the RAC Equivalency Model calculates capacity based solely on an average monthly aircraft utilization factor, PPFs calculate capacity based on actual unit training days available, instructor manning and availability, daily aircraft availability, and simulator availability. The PPF system can also calculate backwards to facilitate identification of resource requirements in terms of instructors, aircraft, simulators, and flight hours needed to accomplish annual training requirements. PPFs provide the individual FRS, the Wing Commander and HQMC with a more detailed program planning and resource requirement determination process. PPFs are replacing the previously described RAC equivalency model as the primary tool for estimating capacity and resource shortfalls.

(2) OPNAVINST 3500.31 governs the utilization of PPFs with the exception of USMC planning assumption values. USMC FRSs shall use the following planning values when submitting annual calculations:

Planned Annual Training/Fly Days	198 Days/Yr
Average Instructor Workday	8 Hrs/Day
Average Aircraft Workday	12 Hrs/Day
Pilot & NFO Instructor Availability	66 Percent
Flight Overhead Rates (Percent)	OPNAV ltr 3500 Ser N882B
Schedule Efficiency Index (Peacetime)	100 percent

Figure 4-1.--USMC FRS PPF Planning Values.

(3) FRS NAPP representatives shall submit squadron PPFs annually via WebPPF (www.nipdr.net/) through their USMC chain of command to CG TECOM (ATB) no later than 30 June. Submissions shall cover a three year period.

(4) RAC equivalency can be computed by entering double the anticipated CAT I requirement into WebPPF and entering zeroes for CAT II-V requirements. Doubling is necessary because the WebPPF model computes capacity up to, but no more than the entered requirement. For example, if a unit's actual capacity is 60 RE, but the CAT I requirement entered in WebPPF is only 50, WebPPF will compute the squadron capacity to be 50.

(5) Marine Corps FRSs will utilize PPFs as a source document to identify current and projected training requirement shortfalls to Wing (resource sponsor), CG TECOM (ATB) (FRS advocate), and CMC (resource provider).

(6) CG TECOM (ATB) shall provide validation and approval of Marine Corps FRS PPF submissions.

2. Managing the Load Plan. Regardless of whether the RAC Equivalency Model or PPFs are used to compute the total training unit capacity, NAPP Representatives can use that capacity in terms of Basic POI students and compute relative capacities in terms of other POIs.

a. RAC Equivalency (RE) Factor. RE Factors are critical in managing and adjusting training load plans while remaining within training unit capacity.

(1) A POI's RE Factor is determined by computing the ratio of the total 1000 phase POI syllabus hours, including instructor aircraft hours for multi-plane flights, over the total 1000 phase T&R syllabus hours of the Basic POI.

For example:

Aircraft T/M/S:	CH-XX
T&R Basic syllabus hours:	60
T&R Basic syllabus hours for flights requiring a separate instructor aircraft:	40
Total Basic syllabus hours:	100
T&R Refresher syllabus hours:	30
T&R Refresher syllabus hours for flights requiring a separate instructor aircraft:	25
Total Refresher syllabus hours	55
CH-XX Refresher RE Factor:	55/100= .55

(2) For NFOs and NAC, CG TECOM (ATB) computes RE Factor in a similar manner; as a decimal fraction of the Basic pilot POI using only those NFO/NAC flights that cannot be accomplished concurrently with a student pilot syllabus flight.

b. If the annual Basic POI training requirement for an FRS is 26 students and the FRS capacity is determined to be 30 RE, the squadron would have a remaining capacity of 4 RE for 100 level Transition, Series Conversion, and Refresher training (30-26 = 4). Using the above example and assuming no Transition or Series Conversion training requirements existed for the year, one could determine the Refresher training capacity by dividing the remaining RE capacity (4) by the Refresher RAC factor (.55) to obtain 7.3 Refresher students (4/.55 = 7.3).

403. FRS TRAINING REQUIREMENTS

1. Marine Corps Aviation production requirements are developed based on Fleet requirements and are independent of FRS capacities.

2. CG TECOM (ATB) is responsible for consolidating MPP-30, ASM-2, MMOA-2, Security Cooperation Education and Training Center (SCETC), and 4th MAW inputs and submitting annual USMC FRS training requirements to HQMC APP and OPNAV. CG TECOM (ATB) will release an annual message NLT 31 August to the MARFORs, Wings, FRSs and MATSGs publishing the USMC FRS training requirements for the next fiscal year and projections for the subsequent seven years.

3. OPNAV consolidates all Navy and Marine Corps aviation training requirements in the annually released (NLT 30 September) Training Requirements Letter (TRL). The TRL provides an eight year outlook and serves three primary purposes:

a. As a long term budget planning document to ensure effective budget planning and resource allocation during the development of resource sponsors Program Objective Memorandums (POM) or Program Reviews (PR).

b. Provides an updated production requirement for the execution year. Adjustments are necessary due to the dynamic nature of the pilot, flight officer and enlisted aircrew end strength requirement.

c. Provides the USMC Fleet requirement to the NAPP. The Fleet requirement is the foundation for development of the Integrated Production Plan.

4. The annual Pilot Training Requirement (PTR), NFO Training Requirement (NFOTR) and Aircrew Training Requirement (ACTR) are grouped by types of students (listed below), indicating the source where the student came from. The category listed in parenthesis correlates the type of student to the training syllabus length. Training requirements for each type are obtained from the agencies listed.

a. Initial Accession. Initial accession (Category I) aviator and NAC production requirements are generated by MPP-30 based upon the existing Authorized Strength Report (ASR)/Grade Adjusted Recapitulation (GAR) and the Year-Group-Steady-State (YGSS) model.

b. Transition. Transition (Category I) aviator and NAC production requirements are generated by ASM-2 based on needs of the Fleet or as directed by HQMC (DC AVN).

c. Conversion. Conversion (Category II) aviator and NAC production requirements are generated by ASM-2 based on needs of the Fleet or as directed by HQMC (DC AVN).

d. Refresher. Refresher (Category III) aviator production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

e. Modified Refresher. Modified Refresher (Category IV) aviator production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

f. Safe-for-Solo Programs. Safe-for-Solo programs (USN Category V) pilot production requirements are generated by MMOA-2 based on planned assignments and time out of the cockpit.

g. Foreign. Foreign aircrew are based on Foreign Military Sales (FMS) requirements. Foreign student POI requirements may be anything from a Category I to a Category V, but are usually classified as a Category V on the TRL for tracking purposes. Annual training requirements are generated by the SCETC under CG TECOM.

5. CG 4th MAW shall submit an estimate of FRS training requirements by T/M/S and POI for the next 3 fiscal years to CG TECOM (ATB) by 30 May annually.

6. FRS flight hours are programmed by CG TECOM (ATB) and submitted to OPNAV via the TRL. FRS flight hours are derived from the annual PTR, syllabus flight hours, and overhead data. CG TECOM (ATB) shall ensure OPNAV has accurate syllabus flight hours and overhead data to compute FRS flight hour requirements. Flight hour management is the responsibility of the respective wing commanders.

404. AVIATOR PRODUCTION PLAN

1. Integrated Production Plan (IPP)

a. The IPP is the annual reconciliation of all NAPP training and the official plan for the NAPP to meet Fleet aviation production requirements. It defines the required monthly input and output for each phase of NAPP training, API through FRS. The document is owned and managed by CNATRA.

b. The IPP is developed on a pull system from the top down, where each stage of aviation training, starting with the FRSs, defines their monthly input requirements to meet output requirements. Once FRSs have solidified their plans in the IPP, CNATRA works backwards through each stage of training, from Advanced back to API, developing the monthly flow of Naval Aviation students into the IPP. This process integrates each stage's outputs with the subsequent stage's input requirements.

2. FRS Summit

a. The purpose of the FRS Summit is to provide Marine Corps FRSs a forum to address training issues and raise awareness of all participants to issues impacting Marine Corps aviation training. It is an opportunity for Marine Corps Aviation to address any problems with the production plan prior to the PAC.

b. Attendees should include representatives from each FRS or equivalent training unit that produces Marine Corps aviators, the MATSGs, HQMC agencies, OPNAV, and senior Marines from CNATRA and CNATT.

c. ATB hosts a Fall and a Spring FRS Summit each year.

(1) Focus of the Fall FRS Summit is to assess current fiscal year aviation production, confirm plans to meet the next fiscal year's aviation production requirements, address training issues impacting aviation production, develop or modify mitigation strategies, and solidify an overall Marine Corps aviation production course of action before attending the Fall PAC. Prior to the Summit, FRSs will use the next fiscal year's training production requirements to develop a Fiscal Year Load Plan and any training requirement conflicts with FRS capacity will be documented and prepared for brief at the Summit.

(2) Focus of the Spring FRS Summit is to conduct a mid-year review, focusing on updating training issues impacting aviation production and verifying progress and effectiveness of mitigation strategies. Mitigation strategies will be developed and/or modified as necessary and the overall Marine Corps aviation production course of action will be updated prior to the Spring Production Alignment Conference.

d. Results of the FRS Summits are released by ATB in an After Action message which lists issues and mitigation strategies and identifies tasks for specific agencies.

3. Production Alignment Conference

a. CNATRA hosts a PAC twice per year. The PAC provides a forum for FRS, Task Group (Primary, Tactical, Rotary, Multi-Engine, NFO, and Enlisted Aircrew), CNATRA production managers, HQMC, CNAF, CNAL, and BUPERS representatives to assess and resolve Integrated Production Plan issues or discrepancies.

b. Attendees include the NAPP Officers from each FRS, CNATRA and CNATT staff, and representatives from ATB, MATSGs, HQMC, CNAF, CNAL, OPNAV, and BUPERS.

c. Focus of the Fall PAC is to assess current fiscal year aviation production, coordinate as Task Groups on plans to make up any current year shortfalls/meet the next fiscal year's aviation production requirements, and to finalize the FRS level Integrated Production Plan.

(1) Prior to the Fall PAC, Task Group and FRS production managers develop a draft of the FRS-level IPP which is submitted to CNATRA. The intent is for CNATRA to have enough time to develop an initial draft of the entire IPP before the PAC.

(2) During the PAC, issue resolution and changes to the higher levels of the IPP may occur. Any changes can take time to reconcile down through API, so the IPP may or may not be completed during the PAC.

d. The result of the PAC is a finalized IPP that is published by CNATRA on its website.

4. Marine Corps Training Information Management System (MCTIMS)

a. MCTIMS is a web-based training management system that consolidates the functions of and replaces the Training Requirements and Resource Management System (TRRMS) and By-Name-Assignment (BNA). It is the user interface that allows all training schools to program dates to respective classes and seats.

b. Manpower/training managers at all levels in the Marine Corps can log into MCTIMS, look up courses and dates, and assign Marines to training seats in order to

generate orders. If a course is funded by TECOM Financial Management (FM), name assignment in MCTIMS must be completed before appropriation data can be requested. Course seat management, including schedule building and name assignment, can be accessed via the Student Registrar menu in MCTIMS. All schoolhouses that train Marine Corps students are required to use Student Registrar per MCO 1553.2. For setting up access to the Student Registrar or for assistance using it, contact TECOM Formal Schools Training Branch (C4611) at 703-432-0071 or DSN 378-0071.

c. Each FRS or equivalent Marine Corps training unit is responsible for maintaining a MCTIMS account and shall appoint a MCTIMS account manager to build and update the unit's schedule. The subsequent fiscal year's class schedules are due into MCTIMS NLT 31 July each year. Class schedules are always susceptible to change and dates can be updated in MCTIMS at any time, but preliminary schedules must be entered by 31 July in order for manpower/training managers to be able to assign students and generate orders in September for October classes. Once the official IPP is released after the Fall PAC, MCTIMS managers shall ensure class schedules in MCTIMS are updated to match the IPP.

405. AIRCREW CORE SKILL INTRODUCTION REFRESHER TRAINING

1. Pilots and NFOs who have not flown the model aircraft within the prescribed time intervals defined below (also see figure 4-2) shall complete the appropriate Core Skill Introduction Refresher training program.

a. CMC designated FRSs and operational commands shall conduct Core Skill Introduction Refresher training; such training shall be specified in individual T&R manuals. Upon completion of Core Skill Introduction Refresher training, pilots and NFOs are normally assigned to the Refresher POI conducted at the tactical squadron.

b. Pilots and NFOs who have been selected for Transition/Model Conversion/Series Conversion shall be assigned to the appropriate Basic, Transition, or Series Conversion POI per Chapter 2, regardless of time out of cockpit.

2. Aircrew Core Skill Introduction Refresher Training Programs

a. Full Refresher Programs. Full Refresher programs (USN CAT III syllabi) consist of appropriate ground school, simulator and training events, plus a NATOPS check in model. Pilots and NFOs returning to a DIFOP billet, who have been DIFDEN or DIFOP (out of type) for greater than 730 days shall receive Refresher/CAT III training.

b. Modified Refresher (MRF) Programs. MRF Programs (USN CAT IV syllabi) consist of appropriate ground school/simulator training plus 10 hours of flight time and a NATOPS check in model. CG TECOM (ATB) will consider additional training for individuals in this program on a case-by-case basis when requested by the unit commander.

(1) Pilots and NFOs returning to a DIFOP billet, having previously held an MOS, having flown their type but not model aircraft within the past 485 days shall receive MRF or CAT IV training at an FRS. (Examples of this type of Refresher training are: MOS 7523 NATC T-45 instructor returning to fly an F/A-18; MOS 7565 NATC TH-57 instructor returning to an AH-1 billet; MOS 7557 NATC T-44 instructor returning to fly a KC-130.)

(2) Pilots and NFOs assigned to "Dual Control Aircraft" who have been DIFDEN or DIFOP (out of type) longer than 485 days but less than or equal to 730 days will receive MRF or CAT IV training at an FRS.

(3) Pilots and NFOs assigned to "Single Control Aircraft" who have been DIFDEN or DIFOP (out of type) for 486-730 days will receive a MRF program.

(4) Pilots and NFOs destined for PCS to 1st MAW may receive a MRF upon approval by CG TECOM (ATB). CG 1st MAW may request other tactical jet training for inbound pilots or NFOs from CMC (MMOA).

c. Safe-for-Solo Programs. Safe-for-Solo programs (USN CAT V) apply only to "Single Control Aircraft" pilots and consist of ground school, simulator training plus a NATOPS check in model. Pilots assigned to "Single Control Aircraft" who have been DIFDEN or DIFOP (out of type) longer than 365 days but less than or equal to 485 days shall receive FRS Safe-for-Solo training.

3. The CMC may designate HMX-1 as a Refresher training squadron for CH-53E and CH-46E aircraft in exceptional situations.

4. Commands may request Core Skill Introduction Refresher training for aircrew not covered by the previous Refresher training programs. Requesting units should make requests to CG TECOM (ATB) via the chain of command and should include at a minimum the reasons for the Refresher training, time out of model/type, periods of availability, and type training desired.

5. CG 4th MAW may request authorization from CG TECOM (ATB) for FRS instructors to designate and annually certify 4th MAW squadron instructor pilots to provide appropriate Refresher training for SMCR aircrew on a case-by-case basis. CG 4th MAW shall coordinate such requests with HQMC [DC AVN (ASM)] and CG TECOM (ATB) via message.

Aircrew Returning from:	Time out of Model:	Training Required:	Training Conducted at:
DUAL CONTROL ACFT DIFDEN or DIFOP (Out of Type)	≤ 485 days	Per T/M/S T&R Manual	Tactical Unit
	486-730 days	Modified Refresher CAT IV	FRS*
	> 730 days	Refresher CAT III	FRS*
SINGLE CONTROL ACFT DIFDEN or DIFOP (Out of Type)	≤ 365 days	Per T/M/S T&R Manual	Tactical Unit
	> 365 days but ≤ 485 days	Safe-for-Solo (Pilots Only)	FRS*
	486-730 days	Modified Refresher CAT IV	FRS*
	> 730 days	Refresher CAT III	FRS*
DIFOP (In Type)	≤ 485 days	Per T/M/S T&R Manual	Tactical Unit
	> 485 days	Modified Refresher CAT IV	FRS*
* Or CMC designated operational command authorized to conduct 100 level Refresher training.			

Figure 4-2.--Aircrew Refresher Training Matrix.

NOTE

CG TECOM (ATB) is approval authority for deviations from above matrix.

406. ASSESSMENT AND REPORTING

1. Proper management of Marine Corps aviation resources requires that CG TECOM (ATB) continually evaluate FRS training requirements and resources to make short range and long range adjustments to maintain a balance between requirements and capacity.

2. FRS Reporting. Many unforeseeable factors affect the training requirements and capacity during the execution of the annual NA/NFO Training Plan via the IPP. The monthly FRS planning and reporting cycle allows adjustments to maintain alignment of training requirements and capacity.

a. Assessments of actual training production compared to the IPP are conducted via teleconference, VTC, or face-to-face briefs monthly. The system utilized to capture monthly data and generate cockpit charts for briefing and assessment is the NAPP Integrated Production Data Repository (NIPDR). The NIPDR cockpit charts are a useful tool in evaluating FRS production performance and capability.

b. Each FRS or equivalent training unit is responsible for submitting unit production data into NIPDR by the 6th of each month. CNATRA will then generate cockpit charts from the data for briefs later in the month.

(1) Pools. The FRS reports two pools to NIPDR: Preload and Students-In-Training (SIT). The FRS Preload is an entitlement (7 weeks) defined as the number of CAT I winged pilots and NFOs that have not commenced their FRS class. This

includes personnel conducting PCS moves, training en route (SERE, etc.), and at the FRS awaiting class start. The SIT pool includes all students who have started a POI. A POI includes any ground training.

(2) Joint FRS Reporting. FRSs that train both Navy and Marine Corps students will report both Navy and Marine Corps student numbers into NIPDR each month.

c. Task Group meetings take place monthly via teleconference, VTC, or face-to-face meetings. Task Groups include the Commodore in charge, TG production managers, and all FRSs and equivalent training units associated with the Task Group. The focus of the meetings is to assess current production to date, identify any problems associated with meeting fiscal year training requirements, develop mitigation strategies, update long term plans, and prepare for the NAPT meeting later in the month.

(1) TG Tactical (TGTAC)/TG Naval Flight Officer (TGNFO). TGTAC includes all Navy and Marine Corps units associated with jet aircraft pilot production. TGNFO is directly associated with jet training units and attends the same meetings, but has a separate Training Wing and Commodore in CNATRA.

(2) TG Rotary. TG Rotary includes all Navy and Marine Corps units associated with rotary wing and tilt rotor pilot production.

(3) Multi-Engine TG (METG). METG includes all Navy, Marine Corps, and Air Force units associated with Multi-Engine fixed wing pilot production as well as intermediate level flight training for tilt-rotor pilots.

(4) Primary Production TG (PPTG). PPTG includes all Navy and Marine Corps units associated with API and Primary pilot flight training production.

(5) TG Naval Aircrew (TGNAC). TGNAC includes all Navy and Marine Corps units associated with aircrew production.

d. The NAPT (described in paragraph 401.2.b) meets monthly via VTC with a teleconference dial-in capability. The monthly meeting focuses on assessing current production to date, informing CNATRA and CNAF on problems associated with meeting fiscal year training requirements, describing mitigation strategies, and updating long term plans.

(1) CG TECOM (ATB) attends the NAPT to represent Marine Corps FRSs and Marine Corps Aviation interests. MATSGs, FRSs, and HQMC agencies are welcome to attend.

(2) Actions-In-Progress (AIPs) generated by the NAPT involving Marine Corps production will be staffed through CG TECOM (ATB).

3. Attrition/Training Delay Notification. FRSs and equivalent training units training Marine aircrew are responsible for notifying CG TECOM (ATB) of RAC attrition/delay issues that occur. CG TECOM (ATB) needs to be informed of any student attrition or delays due to medical, legal, or performance issues. Notification shall be accomplished through the comments section in the monthly NIPDR submissions and discussion in Task Group meetings.

4. Mishap Notification

a. FRSs and equivalent training units training Marine aircrew are responsible for notifying CG TECOM (ATB) of any mishaps that occur involving RACs or impacting training production. The following PLADS shall be included on OPREP3s and MDRs: CG TECOM QUANTICO VA G3; CG TECOM QUANTICO VA ATB

b. CG TECOM (ATB) shall not be included in the privileged investigation messages. ATB does not have a permanent ASO billet on its T/O.

CHAPTER 5

T&R ADMINISTRATION

CHAPTER 5

AVIATION T&R ADMINISTRATION

500. PURPOSE. To provide a process for developing, updating, and staffing T&R manuals.

501. SYLLABUS SPONSOR. A syllabus sponsor is a unit that coordinates T&R changes on behalf of the applicable community in coordination with CG TECOM (ATB). Syllabus sponsors shall maintain close liaison with their respective community counterparts. CG TECOM (ATB) generally assigns sponsorship to MAWTS-1 or a training unit, but may designate a unit from the Total Force or supporting establishment for certain aircraft/systems/MOSs.

502. T&R MANUAL DIRECTORY

1. Aviation T&R syllabi are organized into a series of manuals produced as Navy Marine Corps (NAVMC) Publications. The following matrix contains a list of aviation T&R syllabus sponsors. For an up-to-date listing of T&R manuals, refer to the TECOM ATB website at https://www.intranet.tecom.usmc.mil/sites/atb/default.aspx.

CATEGORY	COMMUNITY/DIRECTIVE	SPONSOR
Policy	Aviation T&R Program MCO 3500.14	CG TECOM (ATB)
Procedures	Aviation T&R Program Manual NAVMC 3500.14A	CG TECOM (ATB)
Fixed Wing	T&R Manuals	
	AV-8B NAVMC 3500.51	MAWTS-1
	EA-6B NAVMC 3500.1	MAWTS-1
	FA-18A/C/D NAVMC 3500.50	MAWTS-1
	KC-130FRT NAVMC 3500.52	MAWTS-1
	KC-130J NAVMC 3500.53	MAWTS-1
Rotary Wing	T&R Manuals	
	AH-1W NAVMC 3500.48	MAWTS-1
	UH-1N NAVMC 3500.49	MAWTS-1
	CH-46 NAVMC 3500.46	MAWTS-1
	CH-53 NAVMC 3500.47	MAWTS-1
	UH-1Y NAVMC 3500.20 Ch 1	MAWTS-1
	AH-1Z NAVMC 3500.XX	MAWTS-1

CATEGORY	COMMUNITY/DIRECTIVE	SPONSOR
Tilt Rotor	T&R Manual	
	MV-22 NAVMC 3500.11 Ch 2	MAWTS-1
Operational Support	T&R Manuals	
	C-9 NAVMC 3500.31	VMR-1, MCAS Cherry Point
	UC-12 NAVMC 3500.30	VMR Det Iwakuni
	HH-46 (SAR) NAVMC 3500.21	VMR-1, MCAS Cherry Point
	HH-1N (SAR) MCO P3500.17A Chapters 13-15	H&HS SAR, MCAS Yuma
	UC-35 MCO P3500.63A	MASD New Orleans
	C-20 NAVMC 3500.96	MCAF Kaneohe Bay, HI
	F-5E/N MCO 3500.65	VMFT-401
Aviation Ground	T&R Manuals	
	Tactical Air Command Center (TACC) MCO P3500.53	MAWTS-1
	Tactical Air Operations Center (TAOC) NAVMC 3500.43	MAWTS-1
	Marine Air Traffic Control (MATC) NAVMC 3500.98	MAWTS-1
	Direct Air Support Center (DASC) NAVMC 3500.97	MAWTS-1
	Low Altitude Air Defense (LAAD) MCO P3500.57	MAWTS-1
	Unmanned Aerial System (UAS) NAVMC 3500.34	MAWTS-1
	Meteorological Oceanographic (METOC) NAVMC 3500.38	MAWTS-1
	Airfield Emergency Services (AES) NAVMC 3500.45	EAF - NATTC MATSG Pensacola ARFF - DOD F&ES, San Angelo, TX EAF/FES Officer, MAWTS 1
	Aviation Operations Specialist (AOS) MCO P3500.71	AOS, NATSS-1 NAS Meridian, MS

503. T&R CHANGES

1. T&R Review. A T&R review is a forum to comprehensively revise a T&R manual. T&R reviews are normally conducted via conference and produce a new version of the T&R manual (e.g., NAVMC 3500.XX"*B*"). T&R reviews will normally convene on a triennial schedule. However, T&R reviews may be convened as appropriate or when higher headquarters directs.

2. Correspondence T&R changes. A correspondence T&R change is a change to an existing manual between T&R reviews. T&R correspondence changes are conducted via electronic means and produce changes to existing T&R manuals (e.g., NAVMC 3500.XX, "*Ch 1*") or new versions as in paragraph 1 above. In some communities, this process may suffice for a complete review in lieu of a conference.

504. T&R REVIEW PROCEDURES

1. Pre-Conference Responsibilities

a. Syllabus Sponsor

(1) Conference Date. Coordinate with CG TECOM (ATB) to determine a T&R conference date.

(2) Announcement Message. Prepare and submit a draft message to CG TECOM (ATB) for release. The final message will be sent to the appropriate commands with an information copy to CMC (DC AVN). This message announces the purpose of the conference and includes the pre-conference METL review POA&M, the conference convening location/date, identifies units required to nominate voting members, and requests the submission of agenda items in "Item, Discussion/Recommendation" format. CG TECOM (ATB) will release the announcement message 90 days before the conference date.

(3) Agenda Items. Consolidate agenda items and coordinate with CG TECOM (ATB) to release a conference agenda message to MARFORs/MCIs as required, MAWTS-1, DC AVN, and all appropriate commands operating/implementing the applicable syllabus.

b. CG TECOM (ATB)

(1) Release announcement and agenda items messages.

(2) Conference Funding. CG TECOM (ATB) shall provide appropriation data funding to voting representatives per MCO P7100.8. Additional conference representatives are encouraged to attend, but must be unit funded.

c. Commands Providing Conference Representatives

(1) Nominate representatives to CG TECOM (ATB) via message or e-mail NLT 45 days prior to the conference. Responsible commands nominating representatives are COMMARFORCOM, COMMARFORPAC, COMMARFORRES, MAW Commanding Generals, COMMARCORBASESJAPAN; MCI EAST, MCI WEST; and applicable schools as nonvoting members. Conference representatives shall be experienced in the day-to-day supervision of the applicable aviation training program being reviewed.

(2) Submit agenda items to the syllabus sponsor in Item, Discussion, Recommendation format via message NLT 45 days prior to the conference.

d. All attendees shall be familiar with agenda items and review the applicable T&R syllabus prior to the conference. Voting members shall staff agenda items and have established command positions prior to attending a conference. As front-end agenda staffing facilitates the T&R update process, syllabus sponsors should not accept additional agenda items during T&R conferences.

2. Conference Responsibilities

a. Syllabus Sponsor. Host the conference and ensure each attendee has access to a draft version of the T&R at the completion of the conference.

b. CG TECOM (ATB). Provide conference guidance to the syllabus sponsor and facilitate T&R review procedures. Ensure individual T&R manuals are developed/updated IAW this Manual.

c. Voting Members and Other Attendees

(1) Any conference attendee may recommend a specific position, but it is the voting representatives who decide T&R content. Agencies providing voting representatives include CG MCCDC, MARFORS, and MAW Commanding Generals; in addition MCI EAST, MCI WEST, and COMMARCORBASESJAPAN shall also provide voting members for ATC, METOC, AES, and AOS T&R manual reviews.

(2) At the conference, voting members and attendees shall provide change recommendations as required. SMEs shall format their respective T&R manual syllabus per Chapter 6. At a minimum, members of the conference shall complete the following tasks:

(a) Evaluate the syllabus for effectiveness.

(b) Coordinate syllabus requirements with other aircraft/aviation ground communities as required.

(c) Propose changes to the syllabus in format and structure IAW chapter 6.

(d) Review/validate/modify the following:

1 Unit Core Competency Information (Mission Statement/METL/Output Standards/CMMR/Qualification & Designation tables/Training Progression Models).

2 Programs of Instruction.

3 Syllabus/Level/Stage information

4 Syllabus events.

5 Training resource requirements.

6 Required T&R matrices/tables.

7 T&R syllabus evaluation forms.

3. Post Conference Responsibilities

a. Syllabus Sponsor. Coordinate with CG TECOM (ATB) to prepare a conference report message to the MARFORs within 10 working days of conference completion. CG

TECOM (ATB) shall release the conference report message within 10 working days of conference completion. Conference report messages shall delineate significant change recommendations and request MARFORs concurrence with the draft T&R manual.

b. CG TECOM (ATB)

(1) Coordinate with the syllabus sponsor to prepare and release, within 10 working days, a conference report message. Ensure electronic versions of draft syllabi are available.

(2) Attach MARFOR comments and forward the draft document to CMC (DC AVN), NLT 60 days after conference completion. Unresolved issues shall be forwarded to CMC (DC AVN) for decision.

(3) Upon MARFOR and DC AVN concurrence, release a message approving the T&R syllabus for interim use. Post the interim approved syllabus to the CG TECOM (ATB) website.

(4) Attach DC AVN and MARFOR comments and forward the document to CG TECOM for signature.

(5) When the NAVMC is signed by CG TECOM, release a message announcing that the NAVMC has been approved (the NAVMC replaces the interim T&R syllabus). Post the NAVMC to the CG TECOM (ATB) website. Coordinate with CMC (ARDE) to coordinate posting to the HQMC website.

c. MARFORS/MAWS

(1) MARFOR/MAW command T&R review voting representatives shall brief their respective commands on post conference results.

(2) MARFORS: Consolidate comments from subordinate units and concur or non-concur with justification to CG TECOM (ATB) via message within 45 days of the conference completion date.

d. CMC (DC AVN). Review the proposed syllabus and concur or non-concur with justification to CG TECOM (ATB) via message NLT 90 days after conference completion.

505. T&R REVIEW CONFERENCE MATRIX. The matrix below outlines and summarizes T&R Review Conference milestones and tasks:

T&R Review Milestones		
Pre-Conference Requirement	**Unit(s)**	**By-Date**
Coordinate Conference Date & Release Convening Msg	Syllabus Sponsor ATB (releases msg.)	NLT 90 days prior to conference date
Nominate Voting Reps to ATB via msg/e-mail.	MARFORS MAWS	NLT 45 days prior to conference
Submit Agenda Items to Syllabus Sponsor	All Units (As Desired)	NLT 45 days prior to conference
Publish Agenda Items	Syllabus Sponsor ATB (releases msg)	NLT 30 days prior to conference
Post-Conference Requirement	**Unit(s)**	**By-Date**
Provide Smooth Draft T&R Manual To ATB	Syllabus Sponsor	NLT 10 days after conference completion
Conference Report msg.	Syllabus Sponsor ATB (releases msg.)	NLT 10 days after conference completion
Provide Concurrence with T&R draft to ATB	MARFORS	NLT 45 days after conference completion
Forward MARFOR Comments to DC AVN	ATB	NLT 60 days after conference completion
Provide Concurrence with T&R draft to ATB	DC AVN	NLT 90 days after conference completion
Announce Interim Approval	ATB	ASAP Upon MARFOR & DC AVN Concurrence
Administrative Review	ATB	ASAP Upon MARFOR & DC AVN Concurrence
Obtain CG TECOM Signature & Publish as NAVMC	ATB	ASAP Upon DC AVN Concurrence

506. T&R CORRESPONDENCE CHANGES

1. Units recommending T&R changes shall submit proposed changes in message format via the respective MAW to the syllabus sponsor. Correspondence must include rationale for the change.

2. The syllabus sponsor shall review and forward the proposed change recommendations to all units in the respective community and CG TECOM (ATB) within 5 working days of receipt of the correspondence. If the proposed change requires coordination with another community, the originating syllabus sponsor shall also submit it to the appropriate related syllabus sponsor.

3. All units concerned shall submit their comments and recommendations to the syllabus sponsor, via the respective parent command/MAW, within 30 days of the date of the syllabus sponsor's request for comments. All comments and recommendations shall be submitted via message.

4. The syllabus sponsor shall:

a. Consolidate comments and provide CG TECOM (ATB) a smooth draft of proposed T&R changes (include update of the T&R event conversion matrix if applicable).

b. Provide CG TECOM (ATB) supporting message documentation from units providing input.

c. Coordinate with CG TECOM (ATB) to release a T&R change recommendation message to the MARFORs and CMC (DC AVN) within 45 days of the date of the syllabus sponsor's request for comments. CG TECOM (ATB) releases the message.

5. CMC (DC AVN) and MARFORS shall review the proposed T&R change and concur or non-concur with justification to CG TECOM (ATB) within 30 days of the syllabus change recommendation message release. Unresolved issues shall be forwarded to CMC (DC AVN) for decision. Upon MARFOR and CMC concurrence, CG TECOM (ATB) shall release a message approving the T&R syllabus change for interim use and post it to the CG TECOM (ATB) website.

6. CG TECOM (ATB) shall attach CMC and MARFOR comments and forward the change for CG TECOM signature as a NAVMC change. When the NAVMC change is signed, CG TECOM (ATB) shall release a message announcing the NAVMC DIR has been changed (the NAVMC change replaces the interim T&R syllabus change). CG TECOM (ATB) shall post the NAVMC change to the CG TECOM (ATB) website and coordinate with CMC (ARDE) to post the change to the HQMC website.

507. T&R CORRESPONDENCE CHANGE MATRIX. The matrix below outlines and summarizes T&R correspondence change milestones and tasks:

T&R Correspondence Change Milestones		
Task	Unit	By-Date
Request for T&R Change by msg to syllabus sponsor via MAW	Unit that requests T&R Change	NA
Forward proposed change to all applicable units for review/comment via msg.	Syllabus Sponsor	NLT 5 days after receipt of change request
Submit comments to syllabus sponsor	All units concerned	NLT 30 days after request for comments
Consolidate comments & provide ATB a smooth draft of proposed changes.	Syllabus Sponsor	NLT 45 days after request for comments
Release T&R Change Recommendation msg.	ATB	NLT 45 days after request for comments
Review Proposed Change & Provide Concurrence/Non-Concurrence with justification	MARFORS DC AVN	NLT 30 days after release of change recommendation msg
Announce Interim Approval	ATB	ASAP Upon MARFOR & DC AVN Concurrence
Administrative Review	ATB	ASAP Upon MARFOR & DC AVN Concurrence
Obtain CG TECOM Signature & Publish as NAVMC Change	ATB	ASAP Upon DC AVN Concurrence

508. APPLICABILITY. When a T&R manual update or change is approved for use, the approved version of the manual becomes the training standard for all applicable units. Units shall transition to the approved T&R syllabus as soon as practicable.

509. T&R ADMINISTRATION MESSAGE TEMPLATES. The following types of messages are provided for syllabus sponsor guidance:

Sample	Sample Title
1	T&R Conference Announcement Message
2	Agenda Item Message
3	Conference Report Messsage Requesting MARFOR Concurrance
4	Message Requesting DC AVN Concurrence
5	Interim Approval Message
6	Final Approval Message

1. T&R Conference Announcement Message Sample

FM CG TECOM QUANTICO VA ATB
TO MARFORS
MAWS
INFO CMC WASHINGTON DC AVN (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATB/
SUBJ/CONFERENCE ANNOUNCEMENT FOR FA-18 AND AV-8 AIRCREW TRAINING AND READINESS (T&R) SYLLABI//
REF/A/NAVMC DIR 3500.14//
REF/B/NAVMC 3500.99//
REF/C/NAVMC 3500.107//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL. REF B IS AV-8B T&R MANUAL. REF C IS FA-18 T&R MANUAL.//
POC/J. M. TILL/MAJ/TECOM ATB STANDARDS/DSN: 278-xxxx//
POC/T. S. TAYLOR/MAJ/B. D. WILD/CAPT/MAWTS-1 S-3/DSN: DSN 267-xxxx/xxxx//
POC/S. R. STRANDBERG/MAJ/MAWTS-1 S-3/DSN: 582-xxxx//
RMKS/1. PER REFS, A T&R CONFERENCE FOR STANDARDIZATION OF TRAINING SYLLABI FOR FA-18 AND AV-8 AIRCREW WILL TAKE PLACE AT MCAS YUMA, BLD 406 (MAWTS-1), FROM 23-26 JUL 06, 0800 TO 1630 DAILY. TENTATIVE SCHEDULE LISTED BELOW:
23 JUL: OPENING RMKS, ADMIN INFO, DISC ITEMS, TACAIR STAN ITEMS, AGENDA ITEMS, T&R CONF.
24-25 JUL: T&R CONF CONTINUED.
26 JUL: TACAIR STAN ITEMS, T&R WRAP-UP.
2. SPECIFIC T&R AGENDA TOPICS FROM UNITS OR AGENCIES ARE TO BE SUBMITTED IAW REF A (ITEM, DISCUSSION, RECOMMENDATION FORMAT) TO (*APPROPRIATE SYLLABUS SPONSORS*), NLT 21 JUN 06. COMMANDS OR SUBJECT MATTER EXPERTS DESIRING DISCUSSION BRIEFING TIME ON 23 JUL MUST CONTACT SYLLABUS SPONSORS NLT 21 JUN 06. REQUEST ALL BRIEFS AND DOCUMENTS BE PREPARED USING MICROSOFT OFFICE PROGRAMS.
3. THE CURRENT VERSION OF REFS B AND C MAY BE VIEWED IN ADOBE ACROBAT FROM INTERNET SITE FOR AVIATION TRAINING BRANCH, TRAINING AND EDUCATION COMMAND HOMEPAGE: xxxxxxxxxx
4. PER REF A, VOTING MEMBERS CONSIST OF REPS FROM THE FOLLOWING ORGANIZATIONS:
    1. COMMARFORPAC
    2. COMMARFORCOM
    3. COMMARFORRES
    4. CG 1ST MAW
    5. CG 2ND MAW
    6. CG 3RD MAW
    7. CG 4TH MAW
    8. CG MCCDC

REPS SHOULD BE EXPERIENCED IN DAY-TO-DAY SUPERVISION OF AVIATION TRAINING PROGRAMS AND BE ABLE TO REPRESENT THEIR COMMAND ON EACH ISSUE. FAMILIARITY WITH THE REFS IS CRUCIAL TO THE SUCCESS OF THE CONF. CG TECOM WILL FUND TWO VOTING REPRESENTATIVES (ONE AV-8 & ONE FA-18) FROM EACH OF THE ABOVE ORGANIZATIONS. REQUEST MARFORS & MAWS SUBMIT ATTENDEE NOMINATIONS TO CG TECOM NLT 21 JUN 06, VIA MSG TO CG TECOM ATB.
INFORMATION:
FULL NAME, SSN, MOS, BILLET, COMMAND, EMAIL, DSN PHONE.
5. APPROPRIATION DATA AND T&R AGENDA WILL BE PUBLISHED VIA SEPCOR.
ATTENDEES NOT LISTED IN PARA 4 WILL BE UNIT FUNDED.
6. ATTENDEES ARE RESPONSIBLE FOR TRAVEL AND BILLETING ARRANGEMENTS.
YUMA BOQ DSN: 269-3578.
7. ATTENDEES ARE RESPONSIBLE FOR COORDINATING SECURITY CLEARANCE REQUIREMENTS FOR ENTRY INTO CONF BUILDING. MAWTS-1 SECURITY CLEARANCE POC: CAPT. HARPER, DSN 269-xxxx; FAX 269-xxxx.
9. UNIFORM IS FLIGHT SUIT OR SERVICE EQUIVALENT.//
BT

2. Agenda Item Message Sample

```
FM CG TECOM QUANTICO VA ATB
TO MARFORS
MAWS
INFO CMC WASHINGTON DC (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATB/
SUBJ/AGENDA ITEMS FOR FA-18 AND AV-8 TRAINING AND READINESS (T&R) CONFERENCES.//
REF/A/MSG/NAVMC DIR 3500.14//
REF/B/MSG/NAVMC 3500.99//
REF/C/MSG/NAVMC 3500.107//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL.  REF B IS AV-8B T&R MANUAL.  REF C IS FA-18 T&R
MANUAL.//
POC/J. M. TILL/MAJ/TECOM ATB STANDARDS/DSN: 278-xxxx//
POC/T. S. TAYLOR/MAJ/B. D. WILD/CAPT/MAWTS-1 S-3/DSN: 267-xxxx//
POC/S. R. STRANDBERG/MAJ/MAWTS-1 S-3/DSN: 582-xxxx//
RMKS/1.  PER REFS, T&R CONFERENCES FOR STANDARDIZATION OF TRAINING SYLLABI FOR FA-18 AND AV-8
AIRCREW WILL TAKE PLACE AT MCAS YUMA, BLD 406 (MAWTS-1), FROM 23-26 JUL 02, 0800 TO 1630 DAILY.
TENTATIVE SCHEDULE LISTED BELOW:
23 JUL: OPENING RMKS, ADMIN INFO, DISC ITEMS, TACAIR STAN ITEMS, AGENDA ITEMS, T&R CONF.
24-25 JUL: T&R CONF CONTINUED.
26 JUL: TACAIR STAN ITEMS, T&R WRAP-UP.
2.  PER REF A, CONFERENCE VOTING MEMBERS HAVE BEEN IDENTIFIED AS
FOLLOWS:
FA-18 T&R CONFERENCE:
    1.  COMMARFORPAC: MAJ J. D. REED
    2.  COMMARFORLANT: LTCOL D. H. WILKINSON
    3.  COMMARFORRES: COL W. J. BLALOCK
    4.  CG FIRST MAW: CAPT K. T. O'ROURKE
    5.  CG SECOND MAW: MAJ B. A. BOND
    6.  CG THIRD MAW: MAJ G. A. KLING
    7.  CG FOURTH MAW: LTCOL R. C. MCMILLIAN
    8.  CG MCCDC: MAJ J. M. TILL
AV-8 T&R CONFERENCE:
    1.  COMMARFORPAC: COL M. R. SAVARESE
    2.  COMMARFORLANT: LTCOL S. R. POMARICO
    3.  COMMARFORRES: NA
    4.  CG FIRST MAW: NA
    5.  CG SECOND MAW: MAJ D. A. SCHLICHTING
    6.  CG THIRD MAW: MAJ M. C. ROBERTS
    7.  CG FOURTH MAW: NA
    8.  CG MCCDC: MAJ J. M. TILL
3.  PER REF A, SUBMITTED AGENDA ITEMS HAVE BEEN CONSOLIDATED BY THE FA-18 AND AV-8 SYLLABUS
SPONSOR.  CONFERENCE AGENDA ITEMS AND CURRENT VERSION OF REFS B AND C MAY BE VIEWED IN ADOBE
ACROBAT FROM THE INTERNET SITE FOR AVIATION TRAINING BRANCH, TRAINING AND EDUCATION COMMAND
HOMEPAGE: xxxxxxxxxx
FOLLOW LINKS OF TRAINING COMMAND, AVIATION TRAINING, DOCUMENTS, TRAINING AND READINESS.  CONFERENCE
VOTING MEMBERS SHOULD ARRIVE PREPARED WITH COMMAND POSITIONS ON AGENDA ITEMS TO FACILITATE CONDUCT
OF CONFERENCES.
4.  APPROPRIATION DATA AND T&R AGENDA WILL BE PUBLISHED VIA SEPCOR.  ATTENDEES NOT LISTED IN PARA 2
WILL BE UNIT FUNDED.
5.  ATTENDEES ARE RESPONSIBLE FOR TRAVEL AND BILLETING ARRANGEMENTS.  YUMA BOQ DSN: 269-3578.
6.  ATTENDEES ARE RESPONSIBLE FOR COORDINATING SECURITY CLEARANCE REQUIREMENTS FOR ENTRY INTO CONF
BUILDING.  MAWTS-1 SECURITY CLEARANCE POC: CAPT HARPER, DSN 269-xxxx; FAX 269-xxxx.
8.  UNIFORM IS FLIGHT SUIT OR SERVICE EQUIVALENT.//
BT
```

3. Conference Report Message Requesting MARFOR Concurrence Sample

```
FM CG TECOM QUANTICO VA ATB
TO MARFORS
MAWS
INFO CMC WASHINGTON DC AVN (APP, ETC.)
MEFS
MAWTS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATB/
SUBJ/FA-18 AND AV-8B TRAINING AND READINESS CONFERENCE REPORT//
REF/A/MSG/NAVMC DIR 3500.14//
REF/B/MSG/NAVMC 3500.99//
REF/C/MSG/NAVMC 3500.107//
REF/D/MSG/CG TECOM QUANTICO VA/211900ZMAY2002//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL.  REF B IS AV-8B T&R MANUAL.  REF C IS FA-18 T&R MANUAL.
REF D IS T&R CONF ANNOUNCMENT MSG.//
POC/RILEY, P.A./LTCOL/TECOM ATB STANDARDS/TEL:DSN 278-xxxx
/EMAIL:RILEYPA@TECOM.USMC.MIL//
POC/JOHNSON, D.K./CIV/TECOM ATB STANDARDS/TEL:DSN 278-xxxx
/EMAIL:JOHNSONDK@TECOM.USMC.MIL//
POC/TAYLOR, B.D./MAJ/MAWTS-1 S-3/TEL:DSN 267-xxxx//
POC/STRANDBERG, S.R./MAJ/MAWTS 1 S-3/TEL:DSN 582-xxxx//
RMKS/1.  PER THE REFS, A T&R CONFERENCE WAS HELD AT MCAS YUMA 23-26
JUL 02 TO UPDATE F/A-18 AND AV-8B AIRCREW TRAINING SYLLABI.
2.  CONFERENCE MEMBERS REPRESENTING VOTING COMMANDS WERE AS FOLLOWS:
F/A-18 T&R CONFERENCE:
    1.  COMMARFORPAC: MAJ J. D. REED
    2.  COMMARFORLANT: LTCOL D. H. WILKINSON
    3.  COMMARFORRES: COL W. J. BLALOCK
    4.  CG FIRST MAW: CAPT K. T. O'ROURKE
    5.  CG SECOND MAW: MAJ B. A. BOND
    6.  CG THIRD MAW: MAJ G. A. KLING
    7.  CG FOURTH MAW: LTCOL R. C. MCMILLIAN
    8.  CG MCCDC: MAJ J. M. TILL
AV-8B T&R CONFERENCE:
    1.  COMMARFORPAC: COL M. R. SAVARESE
    2.  COMMARFORLANT: LTCOL S. R. POMARICO
    3.  COMMARFORRES: NA
    4.  CG FIRST MAW: NA
    5.  CG SECOND MAW: MAJ D. A. SCHLICHTING
    6.  CG THIRD MAW: MAJ M. C. ROBERTS
    7.  CG FOURTH MAW: NA
    8.  CG MCCDC: LTCOL P. A. RILEY
3.  SIGNIFICANT CHANGE PROPOSALS TO F/A-18 AND AV-8B T&R MANUALS INCLUDE:  ALIGNMENT OF TACAIR T&R
TRAINING PHILOSOPHY, STANDARDIZATION OF TACAIR NSQ METHODOLOGY, REVISION OF UNIT CORE COMPETENCY
REQUIREMENTS, AND ESTABLISHMENT OF FLIGHT LEADER WORKUP & EVALUATION EVENTS IN 600 LEVEL.
4.  THE DRAFT F/A-18 AND AV-8B T&R MANUALS MAY BE VIEWED IN ADOBE ACROBAT FROM INTERNET SITE FOR
AVIATION TRAINING BRANCH, TRAINING AND EDUCATION COMMAND HOMEPAGE:  xxxxxxxxxxx.  FOLLOW LINKS OF
TRAINING COMMAND, AVIATION TRAINING, DOCUMENTS, DRAFTS.
6.  PER REF A, REQUEST MARFOR ADDRESSEES CONSOLIDATE SUBORDINATE UNIT COMMENTS AND CONCUR/NON-
CONCUR WITH JUSTIFICATION OF DRAFT FA-18 AND AV-8B T&R MANUALS VIA MSG TO CG TECOM NLT 13 SEP 02.//
```

4. Sample Message Requesting DC AVN Concurrence

```
FM CG TECOM QUANTICO VA ATB
TO CMC WASHINGTON DC AVN APP
INFO MARFORS
MSGID/GENADMIN/CG TECOM ATB//
SUBJ/DRAFT FA-18 T&R MANUAL//
REF/A/DOC/NAVMC 3500.14//
REF/B/MSG/CG TECOM ATB/151939Z/FEB/2006// REF/C/MSG/COMMARFORCOM/221845Z/FEB/2006//
REF/D/MSG/COMMARFORPAC/242052Z/FEB/2006//
REF/E/MSG/COMMARFORRES/091750Z/MAR/2006//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL.  REF B IS MSG STAFFING DRAFT FA-18 T&R FOR MARFOR
CONCURRENCE.  REFS C-E PROVIDE MARFOR CONCURRENCE WITH DRAFT FA-18 T&R MANUAL.//
POC/TILL, J.M. /MAJ/TECOM ATB STANDARDS/TEL:DSN 278-xxxx /EMAIL:JOHN.TILL@USMC.MIL//
RMKS/1.  A T&R CONFERENCE FOR THE FA-18 WAS CONDUCTED AT MAWTS-1  22-26 AUG 05.  PER REFS B-E,
COMMARFORCOM, COMMARFORPAC, AND COMMARFORRES CONCUR WITH THE DRAFT T&R MANUAL.
2.  PER REF A, REQ DC AVN APP CONCUR OR NON-CONCUR WITH JUSTIFICATION WITH THE FA-18 T&R DRAFT
MANUAL.
3.  THE DRAFT T&R MANUAL MAY BE VIEWED AT xxxxxxxxxxxx
SELECT "DRAFT TRAINING AND READINESS MANUALS."
4.  REQ RESPOND VIA DMS MSG TO PLA CG TECOM QUANTICO VA ATB NLT 7 APR 06.//
```

5. Interim Approval Message Sample

```
FM CG TECOM QUANTICO VA ATB
TO MARFORS
MAWS
MEFS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
MAWTS 1
HMX 1 AS REQUIRED
INFO CMC WASHINGTON DC AVN APP ETC. AS REQUIRED
MSGID/GENADMIN/CG TECOM ATB//
SUBJ/FA-18 T&R INTERIM APPROVAL//
REF/A/DOC/NAVMC DIR 3500.14//
REF/B/MSG/COMMARFORCOM/221845Z FEB 06//
REF/C/MSG/COMMARFORPAC/242052Z FEB 06//
REF/D/MSG/COMMARFORRES/091750Z MAR 06//
REF/E/MSG/CMC WASHINGTON DC APP/121505Z APR 06//
NARR/REF A IS AVIATION T&R PROGRAM MANUAL.  REFS B THROUGH E PROVIDE CONCURRENCE WITH DRAFT AV-8B
T&R MANUAL.
POC/TILL, J.M./MAJ/TECOM ATB STANDARDS/TEL:  DSN 278-xxxx
/EMAIL:  JOHN.TILL@USMC.MIL//
RMKS/1.  PER REFS, INTERIM VERSION OF THE FA-18 T&R MANUAL IS APPROVED FOR USE.  THE FA-18 T&R
MANUAL WILL BE PUBLISHED AS A NAVMC DIRECTIVE.
2.  THE MANUAL IS MARKED "INTERIM APPROVED 17 APR 06" AND MAY BE ACCESSED AT xxxxxxxxxxxx
3.  T&R DOWNLOADS MAY BE ACCESSED AT xxxxxxxxxxxxx
4.  THE FA-18 CORE COMPETENCY RESOURCE MODEL (CCRM)/FLIGHT HOUR MODEL IS UPDATED TO REFLECT THIS
INTERIM APPROVED T&R MANUAL.  IT MAY BE ACCESSED AT xxxxxxxxxxxx
5.  REQ MAGS ENSURE DISSEMINATION TO SQUADRONS.// BT
```

6. Final Approval Message Sample

```
FM CG TECOM ATB(UC)
TO MARFORS
MEFS
MAWS
MAG/MACG/MWSG AS REQUIRED
SQUADRONS/UNITS AS REQUIRED
MAWTS 1
INFO CMC WASHINGTON DC AVN APP ETC. AS REQUIRED
HMX-1 AS REQUIRED
MSGID/GENADMIN/CG TECOM ATB//
SUBJ/FA-18 T&R MANUAL//
REF/A/DOC/NAVMC DIR 3500.14//
POC/TILL, J.M./MAJ/TECOM ATB STANDARDS/TEL:DSN 278-xxxx/
EMAIL:  JOHN.TILL@USMC.MIL//
RMKS/1.  PER REF A, FA-18 T&R MANUAL HAS BEEN SIGNED AS NAVMC DIRECTIVE 3500.107 DATED 25 MAY 06.
2.  IT MAY BE ACCESSED ON THE ATB WEBSITE:
xxxxxxxxxxx
SELECT "TRAINING & READINESS MANUALS," "FIXED WING TRAINING AND READINESS MANUALS."
3.  T&R DOWNLOADS HAVE BEEN UPDATED TO REFLECT THE FOLLOWING CHANGES: AA-263 REFLY INTERVAL CHANGED
TO REFLECT A 365 DAY REFLY INTERVAL VICE AN *; NS-253 GOAL CHANGED TO REFLECT LOW ANGLE POP-UP
ADDITION, PREREQUISITE CHANGED TO AS-239 VICE AS-237, AND 3 BDU-48'S ADDED TO ORDNANCE REQUIREMENT.
THE DOWNLOADS ARE LOCATED ON THE ATB WEBSITE:
xxxxxxxxxxx
4.  THIS NAVMC DIRECTIVE IS THE ONLY APPROVED FA-18 T&R MANUAL.  ENSURE ALL PREVIOUS
VERSIONS/INTERIM VERSIONS ARE REPLACED WITH THE DIRECTIVE LISTED ABOVE.
5.  REQUEST MAGS ENSURE DISSEMINATION TO SQUADRONS.// BT
```

CHAPTER 6

TRAINING AND READINESS SYLLABUS STRUCTURE

FIGURES

CHAPTER 6

TRAINING AND READINESS SYLLABUS STRUCTURE

600. PURPOSE

1. The purpose of this chapter is to provide guidance on how to develop or revise an aviation T&R manual. Specifically, this chapter provides standardization policy for the structure, organization, and content of community T&R manuals. Community T&Rs shall adhere to the content, sequence, and format requirements delineated herein. Communities shall comply with policy in this Manual when developing or updating community aviation T&R Manuals.

2. The development or revision of a T&R manual is a time-intensive and complex process that community SMEs must understand. Factors to consider include unit and individual syllabi, event complexity, conditions, R-coding, chaining, refly, amongst others, when determining T&R requirements. The routine T&R conference procedures are to first review and/or revise unit training requirements, then do the same with individual training requirements. Specifically, SMEs should conduct a rough revision of unit CMMR information and individual T&R requirements summarized in matrices throughout each individual T&R chapter. After rough revisions are completed, T&R matrices should be compared to unit CMMR and individual Maintain CSP and MSP tables so that T&R adjustments can made as needed. From there, SMEs should continue with revising remaining T&R required information. As a last step, ensure unit CMMR and individual T&R requirements (include the Maintain CSP and MSP tables) are accurate.

3. T&R syllabi within a community may be interrelated/dependant (particularly for crewed platforms/systems), therefore, individual T&R syllabi should always be developed in concert.

601. T&R STRUCTURE AND CONTENTS. Aviation T&R manuals shall consist of at least two chapters. The first chapter of every T&R manual delineates unit T&R. The second and subsequent chapters delineate individual training and readiness requirements for each applicable MOS/crew position within the community. The number of chapters depends on the number of MOSs/crew positions. For example, a CH-53 T&R manual has three MOSs/crew positions and therefore will have four chapters in noted order: (1) CH-53 Training and Readiness Unit Requirements; (2) Pilot; (3) Crew Chief; and (4) Aerial Observer. All paragraphs in a T&R manual shall be numbered sequentially with the first number being the chapter number and the following two numbers being the actual paragraph number within the chapter (100, 101, 102, etc).

602. T&R UNIT REQUIREMENTS

1. This section delineates Chapter 1 training and readiness unit requirements that include T&R format and Core Model requirements. Subparagraphs in Chapter 1 include applicable Unit Mission, Core METL, T/O information, Core METL Output Standards, Core METL to Core/Mission/Core Plus Skills Matrices, and Core Model Minimum Requirements (CMMR), and supporting matrices.

2. Every community T&R shall title chapter 1: "(Name of Community) TRAINING AND READINESS UNIT REQUIREMENTS."

3. Chapter 1 shall contain the information in the order listed below:

Chapter 1 Required Paragraphs

100. (Community) TRAINING AND READINESS UNIT REQUIREMENTS
101. MISSION
102. TABLE OF ORGANIZATION
103. CORE SKILL AND MISSION SKILL ABBREVIATIONS
104. CORE METL AND CORE METL OUTPUT STANDARDS
105. CORE METL TO CORE SKILLS/MISSION SKILL MATRIX
106. CORE METL TO CORE PLUS/MISSION SKILL MATRIX
107. CMMR CORE AND MISSION SKILLS CREW DEFINTION AND PROFICIENCY REQUIREMENTS
108. CMMR CORE PLUS SKILL CREW DEFINITION AND PROFICIENCY REQUIREMENTS
109. CMMR COMBAT LEADERSHIP REQUIREMENTS
110. UNIT INSTRUCTOR REQUIREMENTS
111. ORDNANCE REQUIREMENTS
112. TRAINING RESOURCE REQUIREMENTS

NOTE

At a minimum, each individual T&R chapter shall include above paragraphs in the order listed. It is understood that some communities may need to expound on information; therefore as long as the paragraphs appear in proper sequence, other paragraphs may be inserted. Just ensure all paragraphs are numbered sequentially.

4. **Formatting examples for each required paragraph are provided in *italics* throughout this section.**

5. Tactical aviation community T&Rs shall delineate CMMR; operational support community T&Rs are not required to delineate CMMR, but shall adhere to the remainder of unit T&R structure requirements. The paragraph provided below shall appear as the first paragraph of chapter 1 for all aviation T&R manuals.

100. (Community) UNIT TRAINING AND READINESS REQUIREMENTS. The goal of Marine Aviation is to attain and maintain combat readiness to support Expeditionary Maneuver Warfare while conserving resources. The standards established in this program are validated by subject matter experts to maximize combat capabilities for assigned METs. These standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Training events are based on specific requirements and performance standards to ensure a common base of training and depth of combat capability.

6. Mission Statement. A clear and succinct description of the unit's purpose for existence that contains required capabilities the unit is expected to provide the gaining force commander during combat or contingency operations. Mission statement format shall be as follows:

101. MISSION. Support the MAGTF commander by (provide general mission description; e.g., destroying surface targets and enemy aircraft), day or night under all weather conditions during expeditionary, joint or combined operations.

7. Table of Organization (T/O) Information. Unit T/O information shall be derived from the current T/O managed by Total Force Structure, MCCDC. Community T&Rs shall list authorized billet structure by MOS and organizational structure (number of aircraft shall be included for tactical operational flight squadrons). Units that provide standardized sub-units such as detachments or teams by T/O shall list such sub-units. T/O format shall be as follows:

a. For aviation ground communities,

(1) Each subunit shall be defined in a paragraph immediately after the T/O statement. Sample paragraph follows:

"MATC Mobile Team (MMT). An MMT is task-organized to provide initial rapid response ATC to support any MAGTF and/or combined/joint mission. MMT shall support operations to air sites and may support operations at air ports or air facilities. The baseline MMT for 72-hour continuous operations without re-supply or additional augmentation to meet any MAGTF and/or combined/joint mission is a standard 6-Marine team."

(2) The minimum crew composition for each subunit shall be included in the T/O table. A list reflecting the minimum numbers for each crew position shall be listed. The T/O table below contains the example.

b. T/O format shall be as follows:

102. TABLE OF ORGANIZATION (T/O). Refer to T/O #XXXX managed by Total Force Structure, MCCDC, for current authorized organizational structure and personnel strength. Information below depicts (community) T/O information as of the date of this directive.

T/O for One Squadron/Unit
Squadron *XX aircraft* *XX Pilots/XX Crew Chiefs*
Detachment *XX aircraft* *XX Pilots/XX Crew Chiefs*
(Avn ground crew composition example) *MMT* *1 MATC Officer/SNCO.* *3 Controllers.* *1 NAVAID Technician.* *1 MATC Communication Technician.*
Notes: As needed.

8. Core Skill and Mission Skills Abbreviations. Community T&Rs shall contain Core Skill and Mission Skill standard abbreviations as set forth in each manual. Abbreviations shall be listed alphabetically in a table as noted in the below sample format. Shading indicates core plus skills:

103. CORE SKILLS AND MISSION SKILL ABBREVIATIONS. Shading indicates core plus skills.

Core Skills/Mission Skills Abbreviation (if applicable)	
CORE SKILL	*ABBREVIATION*
Arrival/Departure Control	*ADC*
Anti-Air Warfare	*AAW*
Approach Control	*APC*
Basic Tower Control	*BTC*
Forward Air Control (Airborne)	*FAC(A)*
Tactical Air Coordination (Airborne)	*TAC(A)*

9. Core METL and Core METL Output Standards

a. Core METL. A standardized approved list of specified tasks a unit is designed or organized to perform. Selected tasks are drawn from the Marine Corps Task List (MCTL) and are standardized by type unit.

b. Core METL Output Standards. The required level of performance a unit must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of Unit Training Events.

c. The Unit Core METL and Output Standards are approved by CG MCCDC in accordance with MARADMIN 390/07 (DRRS Implementation Responsibilities for Marine Corps Organizations, Units, and Installations). They may be accessed at the TECOM/ATB website at https://www.intranet.tecom.usmc.mil/sites/atb/default.aspx.

d. Core METL and Output standards shall be formatted as follows:

104. CORE METL AND CORE METL OUTPUT STANDARDS

1. Core METL. A standardized list of specified tasks a unit was designed to perform. Selected tasks are drawn from the Marine Corps Task List (MCTL) and are standardized by type unit.

2. Core METL Output Standards. The required level of performance a unit must be capable of sustaining during contingency/combat operations by MET to be considered MET-ready. Output standards will be demonstrated through the incorporation of Unit Training Events.

(Community) Core METL/Core Skills Matrix/Output Standards		
Mission Essential Task List		*Output Standard (Sorties/Day)*
MCT	*MET*	
3.2.3.2	*Conduct Offensive Anti-air Warfare (OAAW)*	*20*
3.2.5.4	*Conduct Forward Air Control (Airborne) [FAC(A)]*	*16*
5.3.2.7.3	*Conduct Tactical Air Coordination (Airborne)*	*8*
2.2.5.2.2	*Conduct Multisensor Imagery Reconnaissance*	*8*

10. Core METL to Core Skill/Mission Skill Matrix

a. Core Skills. Fundamental, environmental, or conditional capabilities required to perform basic functions (1000 - 2000 phase). These basic functions serve as tactical enablers that allow crews to progress to the more complex Mission Skills. Core Skills are introduced in FRS and entry-level school training and are further refined and expanded at the squadron level.

b. Mission Skills. Mission Skills enable a unit to execute a specific MET. They are comprised of advanced unique event(s) (3000 phase) that are focused on MET performance and draw upon the knowledge, aeronautical abilities, and situational awareness developed via Core Skill training.

c. The Core Model requires individual and unit proficiency in both Core Skills and Mission Skills.

d. METL to Core Skills/Mission Skill Matrix. Provides a pictorial view of the relationship between the unit Core METL and each Core and Mission Skill required to perform the METL. Shading indicates a Core Plus MET and corresponding Mission Skill.

e. Core METL to Core Skills/Mission Skill Matrix format shall be as follows:

105. CORE METL TO CORE SKILLS/MISSION SKILL MATRIX. Provides a pictorial view of the relationship between the unit Core METL and each Core Skill and Mission Skill required to perform the METL. Shading indicates a Core Plus MET and corresponding Mission Skill.

Core METL to Core Skills/Mission Skills Matrix (CH-46E example)														
METL	***Core Skills***							***Mission Skills***						
	FAM/ INST	*CAL*	*EXT*	*FORM*	*TERF*	*NS HLL*	*NS LLL*	*CQ*	*EAF*	*AS*	*AD*	*TRAP*	*EVAC*	*RAID*
Conduct Aviation Ops from Expeditionary Sea based Sites	✓	✓	✓	✓		✓	✓	✓						
Conduct Aviation Ops from Expeditionary Shore based Sites	✓	✓		✓		✓	✓		✓					
Conduct Assault Transport	✓	✓	✓	✓	✓	✓	✓			✓				
Conduct Air Delivery	✓	✓	✓	✓		✓	✓				✓			
Conduct Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)	✓	✓		✓	✓	✓	✓					✓		
Conduct Air Evacuation	✓	✓		✓	✓	✓	✓						✓	
Conduct Airborne Raid (RAID)	✓	✓	✓	✓	✓	✓	✓							✓

11. Core METL to Core Plus/Mission Skills

a. Core Plus Skills. Core Plus Skills have a low probability of execution or are theater specific (4000 phase) and are not included in the unit readiness evaluation. However, units may elect to train several crews in these Core Plus skill areas to maintain resident expertise.

b. Core METL to Core Plus/Mission Skills Matrix. Provides a view of the relationship between the unit METL, Core Plus and Mission Skills required to perform the METL. Shading indicates a Core Plus MET and corresponding Mission Skill.

c. Core METL to Core Plus/Mission Skill Matrix format shall be as follows:

106. CORE METL TO CORE PLUS/MISSION SKILL MATRIX. Provides a view of the relationship between the unit Core METL and each Core Plus and Mission Skill required to perform the METL. Shading indicates a Core Plus MET and corresponding Mission Skill.

Core METL to Core Plus/Mission Skills Matrix (CH-46E example)																
METL	***Core Plus Skills***										***Mission Skills***					
Conduct:	*SFAM*	*TAC*	*CAL*	*EXT*	*NBC*	*DM*	*MAT*	*HIE*	*TG*	*CQ*	*CQ*	*EAF*	*ASLT*	*AD*	*TRAP*	*EVAC*	*RAID*
Aviation Ops from Exped Sea based Sites	✓										✓						
Aviation Ops from Exped Shore based Sites									✓			✓					
Assault Transport		✓			✓	✓	✓	✓	✓				✓				
Air Delivery														✓			
Aviation Support of Tactical Recovery of Aircraft and Personnel (TRAP)		✓				✓		✓	✓						✓		
Air Evacuation								✓	✓							✓	
Airborne Rapid Insertion/Extraction (RAID)		✓				✓		✓	✓								✓

12. Core Model Minimum Requirements

a. The Community or Unit CMMR is determined by community T&R conference SMEs and consists of the Crew Definition/Core and Mission Skill Proficiency, Crew Definition/Core Plus Skill Proficiency, Combat Leadership, and Instructor Requirements tables.

b. The CMTR will display Core and Mission Skill Proficiency numbers in terms of individuals and crews by comparing actual numbers of proficient crews (via M-SHARP logged data) to CMMR tables providing a readiness picture to the unit. The CMTR will not display Core Plus Skill Proficiency.

c. Core and Mission Skill Crew Definition and Proficiency Requirements. The crew definition delineates crew position and proficiency requirements for each Core and Mission Skill. The numbers associated with each crew position column reflect the number of Core and Mission Skill Proficient individuals required. CMMR Core and Mission Skills format shall be as follows:

107. (Name of Community) CMMR CORE AND MISSION SKILLS CREW DEFINITION AND PROFICIENCY REQUIREMENTS. This table delineates crew position and proficiency requirements for each Core and Mission Skill. The numbers associated with each crew position column reflect the number of Core and Mission Skill Proficient individuals required.

CMMR Core and Mission Skills				
CORE SKILLS	SQDN Pilots	SQDN Crew Chiefs	SQDN AG/O	SQDN Crews
FAM/INST	16	8	8	8
CAL	16	8	8	8
EXT	12	6	6	6
FORM	16	8	8	8
TERF	16	8	8	8
NS HLL	16	8	8	8
NS LLL	16	8	8	8
AG	12	6	6	6
GTR	12	6	6	6
MAT	12	6	6	6
HIE	12	6	6	6
TAC	12	6	6	6
CQ	12	6	6	6
MISSION SKILLS	SQDN Pilots	SQDN Crew Chiefs	SQDN AG/O	SQDN Crews
CQ	12	6	6	6
EAF	12	6	6	6
ASLT TRANSPORT	12	6	6	6
AIR DELIVERY	12	6	6	6
TRAP	12	6	6	6
AIR EVAC	12	6	6	6
RAID	12	6	6	6

d. Core Plus Skill Crew Definition and Proficiency Requirements. The crew definition delineates crew position and proficiency requirements for each Core Plus Skill. The numbers associated with each crew position column reflect the number of Core Plus Skill Proficient individuals required for the unit to achieve Core Plus Skill Proficiency. In the event that a Core Plus Skill becomes a requirement to perform a given mission, the Core Plus Skill will be considered Core and the unit shall train to the CMMR for that Core Plus Skill. The matrix shall be formatted as follows:

108. (Name of community) CMMR CORE PLUS SKILL CREW DEFINITION AND PROFICIENCY REQUIREMENTS. This table delineates crew position and proficiency requirements for each Core Plus Skill. The numbers associated with each crew position column reflect the number of Core Plus Skill Proficient individuals required.

CMMR Core Plus Skills				
CORE PLUS SKILLS	SQDN Pilots	SQDN Crew Chiefs	SQDN AG/O	SQDN Crews
SFAM	-	6	-	6
TAC	12	6	6	6
CAL	12	6	6	6
EXT	12	6	6	6
NBC	12	6	6	6
DM	12	6	6	6
MAT	12	6	6	6
HIE	12	6	6	6
TG	-	6	-	6
CQ	12	6	6	6

13. Combat Leadership Requirements

a. Each unit must maintain Combat Leaders capable of providing the commander the leadership skills and qualities required to project combat power. The CMMR for Combat Leadership is defined in terms of minimum numbers of tactical leaders required to execute the unit METL and is delineated in the respective model/series specific T&R Manual.

b. The combat leadership metric (CMMR) is applicable to the entire unit readiness assessment and is not tied specifically to individual METs. Individuals count towards this requirement upon designation in writing by the commanding officer. The figure below provides a generic example of combat leadership requirements.

c. Combat Leadership designations are earned at the unit level in accordance with this Manual and the community specific T&R Manual.

d. Combat leadership requirements shall be formatted as follows:

109. CMMR COMBAT LEADERSHIP REQUIREMENTS. At a minimum, in order to be considered Core Competent, a unit must possess the following numbers of crews with the listed combat leadership designations.

Unit CMMR Combat Leadership	
COMBAT DESIGNATION	SQDN Pilots
HAC	12
SEC LDR	6
DIV LDR	4
FLT LDR	2
AMC	2

14. Unit Instructor Requirements

a. The CMMR for instructors is defined in terms of the minimum requirement to replenish the cadre of Core and Mission Skill Proficient crews and Combat Leaders every year. Individuals count towards this requirement upon designation in writing by the commanding officer, as depicted below. Commanding and executive officers do not count in this total.

b. Instructor unit requirements shall be formatted as follows:

110. UNIT INSTRUCTOR REQUIREMENTS. A unit should possess the following numbers of personnel with the instructor designations listed in the matrix.

CMMR Instructors	
INSTRUCTOR DESIGNATION	SQDN Pilots
NATOPS	1
Asst NATOPS I	4
Instrument	5
TERFI	4
NSI	5
WTI	2
AGI	7
FLSE	2

* - FLSE are designated by the MAG Commanding Officer

15. Ordnance Requirements

a. Communities shall thoroughly review and update training ordnance requirements to reflect a unit annual ordnance training requirement.

b. Communities requiring individual ordnance training proficiency shall establish annual ordnance training requirements on a per crewmember basis.

c. Crew served platforms shall establish annual ordnance training requirements for a standard crew.

d. Communities that have a HQMC-validated ordnance model of the CCRM are not required to develop an ordnance table.

111. ORDNANCE REQUIREMENTS. (Insert ordnance table, if required. A notional example follows below).

	INITIAL CREW (1)	REFRESHER CREW (2)	PROFICIENT CREW (3)
2.75" RKTS - HE/INERT	98	63	42
2.75" RKTS - WP/RP	28	28	14
2.75" RKTS - ILLUM	7	7	7
2.75" RKTS - APKWS/LOGIR	TBD	TBD	TBD
7.62MM - GAU-17	27000	15000	10500
.50 CAL - GAU-16	5800	3000	2100
7.62MM - M-240	6400	4000	2800
Chaff	400	240	210
Flares	520	340	230
PILOT (23)	7	8	8
CC/AO (36)	12	12	12

General: In these calculations ordnance is always included on ordnance optional sorties, but S and S/A sorties are not included. Requirements are per individual. Assumption is that Initial/Refresher syllabus may be completed in 1 year.

1. *Initial Basic crews shall fly all 2000 and 3000 phase events.*
2. *Refresher crews shall fly all R coded 2000 and 3000 phase events.*
3. *Proficient crews are defined by the Core Skill Proficiency table on page 6-10 and their minimum annual ordnance requirements are driven by sorties in the Maintain Table (individual crew chapters).*
4. *Based on a full HMLA T/O of 23 UH pilots and 36 CC/AO, with the assumption that roughly 1/3 fall into each POI.*
5. *"Type" column indicates which aircrew factor is used to determine ordnance totals.*

ONE-FY ANNUAL SQUADRON REQUIREMENTS					
	Type	INITIAL PILOT x 7 CC/AO x 12	REFRESHER PILOT x 8 CC/AO x 12	PROFICIENT PILOT x 8 CC/AO x 12	ANNUAL SQUADRON TOTAL
2.75" RKTS - HE/INERT	P	686	504	336	1526
2.75" RKTS - WP/RP	P	196	224	112	532
2.75" RKTS - ILLUM	P	49	56	56	161
7.62MM - GAU-17	CC/AO	324000	180000	126000	630000
.50 CAL - GAU-16	CC/AO	69600	36000	25200	130800
7.62MM - M-240	CC/AO	76800	48000	33600	158400
CHAFF	P	2800	1920	1680	6400
FLARES	P	3640	2720	1840	8200

16. Training Resource Requirements. If applicable, address any critical training resources required to achieve T&R requirements (e.g., ranges, adversary support, tanker support, etc). Objectively defining and identifying aviation training resource requirements will assist operational and HQ agencies in defining required aviation training resources. Format as follows:

112. TRAINING RESOURCE REQUIREMENTS. If applicable.

603. INDIVIDUAL T&R REQUIREMENTS

1. This section delineates individual training requirements for each applicable MOS/crew position in the community. Each community T&R will contain at least one chapter delineating requirements for individual training.

2. Each MOS/crew position chapter shall be titled "(Primary MOS title/number) INDIVIDUAL TRAINING AND READINESS REQUIREMENTS."

3. Each individual T&R chapter in the community T&R shall contain the information listed in the following order:

Contents
X00. INDIVIDUAL TRAINING AND READINESS REQUIREMENTS
X01. TRAINING PROGRESSION MODEL
X02. INDIVIDUAL CORE SKILL PROFICIENCY REQUIREMENTS
X03. INDIVIDUAL MISSION SKILL PROFICIENCY REQUIREMENTS
X04. CERTIFICATIONS, QUALIFICATIONS AND DESIGNATIONS
X05. PROGRAMS OF INSTRUCTION
X06. ACADEMIC TRAINING
X07. SYLLABUS NOTES
X08. CORE SKILL INTRODUCTION FRS ACADEMIC PHASE (0000)
X09. CORE SKILL INTRODUCTION PHASE (1000)
X10. CORE SKILL PHASE (2000)
X11. MISSION SKILL PHASE (3000)
X12. CORE PLUS PHASE (4000)
X13. INSTRUCTOR TRAINING PHASE (5000)
X14. REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE (6000)
X15. T&R SYLLABUS MATRIX
X16. SYLLABUS EVALUATION FORMS
X17. SIMULATOR MISSION ESSENTIAL SUBSYSTEMS MATRIX (MESM)

NOTE

Some communities may need to expound on the information listed above. As long as the paragraphs appear in proper sequence, other paragraphs may be inserted. Ensure all paragraphs are numbered sequentially.

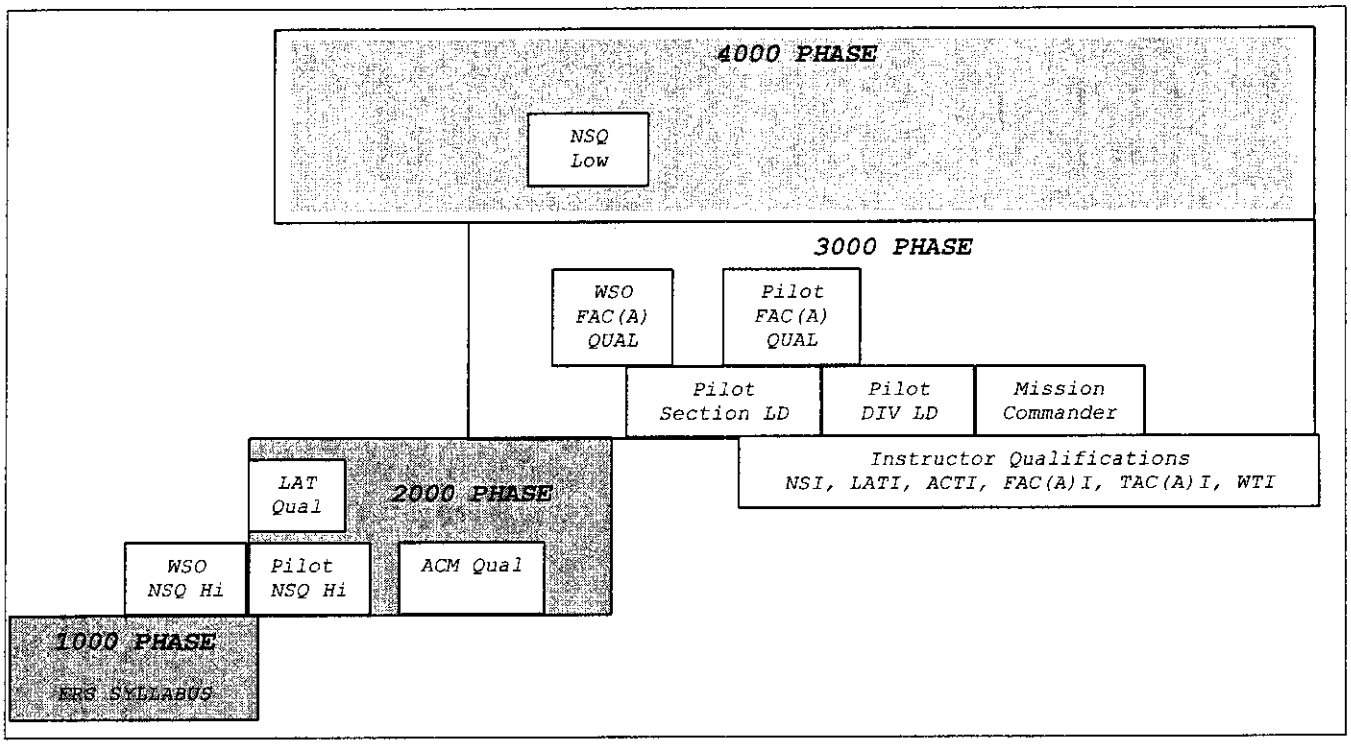
4. **Formatting examples for each required paragraph are provided in *italics* throughout this section.**

5. The below paragraph shall appear as the first paragraph of each individual MOS/crew position chapters.

X00. [Primary MOS title/number] INDIVIDUAL TRAINING AND READINESS REQUIREMENTS. This T&R Syllabus is based on specific goals and performance standards designed to ensure individual proficiency in Core and Mission Skills. The goal of this chapter is to develop individual and unit warfighting capabilities.

6. Training Progression Model. A training progression model graphically depicts community recommended progression for the average crewmember in terms of Core Skills, Mission Skills, Certifications, Qualifications and Designations. Communities shall develop a training progression model for each MOS T&R chapter. The training progression model shown below serves only as an example. There is no set format for a progression model as long as it accurately depicts the progression each community sets for its personnel. The paragraph provided below shall appear prior to each training progression model:

X01. (Community MOS) TRAINING PROGRESSION MODEL. This model represents the recommended training progression for the average (MOS title) crewmember. Units should use the model as a point of departure to generate individual training plans.



7. Individual Core Skill Proficiency. Proficiency in a Core Skill requires an individual to attain and maintain proficiency per T&R Core Skill Attain and Maintain tables. Core Skill Attain and Maintain tables shall be reviewed and updated as appropriate at each T&R conference.

a. CSP Attain Table Events. Events in CSP Attain Tables consist of events required for individuals to initially attain proficiency in each Core Skill. To attain Individual CSP, an individual must simultaneously have a proficient status in all of the events listed in the CSP Attain Table for that Core Skill. All 2000 phase Basic POI events shall be listed in the Attain table under the applicable Core Skill.

b. CSP Maintain Table Events. Events in CSP Maintain Tables consist of events required for individuals to maintain proficiency in each Core Skill. To maintain Individual CSP, an individual must maintain a proficient status in all of the events listed in the CSP Maintain Table for that Core Skill. Communities shall consider the entire T&R to include event complexity, event conditions (day, night, ATC non-radar, severe weather), R-coding, event chaining, event refly, etc. when determining CSP Maintain requirements.

c. Proficiency in Core Plus Skills is not normally required to obtain unit CSP; however, Core Plus Skill proficiency requirements shall be listed in Attain/Maintain Tables to facilitate standardization. All 4000 phase Basic POI events shall be listed in an Attain Table under the applicable Core Plus Skill. Events in Core Plus Skill Maintain Tables consist of events required for experienced individuals to maintain proficiency in each Core Plus Skill.

d. The following rules apply when updating/developing Attain and Maintain CSP tables.

- All Core Skills shall be represented in the Attain and Maintain CSP tables
- All 2000 phase events shall be listed in the Attain table under the applicable Core Skill
- All events in the Attain table that are not listed in the Maintain table shall be chained by event(s) in the Maintain Table unless the event(s) is not assigned a refly interval (one time training requirement)
- The Maintain table shall contain at least one event for each Core Skill
- Events in the Maintain table shall be R-coded (Refresher POI) events

During a T&R review, SMEs shall consider the following regarding T&R events in the Attain table that are not chained by event(s) in the Maintain table:

- Such events must not be assigned a refly factor ('*' listed for refly factor)

or

- Such events must be moved to the Maintain table

or

- Such events must be moved out of the Core Skill phase (2000) to another phase (4000+)

or

- Such events must be deleted from the syllabus

e. Individual CSP format shall be as follows:

X02. INDIVIDUAL CORE SKILL PROFICIENCY (CSP) REQUIREMENTS. A CSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual CSP. In order to be considered proficient in a Core Skill, an individual must attain and maintain proficiency in Core Skill events as delineated in the below paragraphs.

1. Events Required to Attain Individual CSP. To initially attain CSP in a Core Skill, an individual must simultaneously have a proficient status in all 2000 phase T&R events listed for that Core Skill:

Individual Core Skill Proficiency Attain Table

MOS/Billet/Crew Position	CS1	CS2	CS3	CS4	CS4	CS5	CS6	CS7
T&R events required to Attain Core Skill Proficiency	S2100R	S2200R	S2300R	S2400	S2500R	S2600	S2700R	S2750R
	2101	2201	2301	2401R		2601R	2701	2751R
	2102R	2202R	2301			2602	2702	
	2103		2303R			2603	2703R	
	S2104					2604R		
	2105R							

R = Refresher POI
S = Event Conducted in Simulator

2. Events Required to Maintain Individual CSP. To maintain CSP in a Core Skill, an individual must maintain proficiency in all 2000 phase T&R events listed for that Core Skill:

NOTE

Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

Individual Core Skill Proficiency Maintain Table								
MOS/Billet/Crew Position	***CS1***	***CS2***	***CS3***	***CS4***	***CS4***	***CS5***	***CS6***	***CS7***
T&R events required to Attain Core Skill Proficiency					*S2500R*		*S2700R*	*S2750R*
				2401R		*2601R*		*2751R*
		2202R						
			2303R				*2703R*	
						2604R		
	2105R							
R = Refresher POI *S = Event Conducted in Simulator*								

8. Individual Mission Skill Proficiency. Proficiency in a Mission Skill requires an individual to attain and maintain proficiency per T&R Mission Skill Attain and Maintain tables. Mission Skill Attain and Maintain tables shall be reviewed and updated as appropriate at each T&R conference.

a. MSP Attain Table Events. Events in MSP Attain Tables consist of events required for individuals to initially attain proficiency in each Mission Skill. To attain Individual MSP, an individual must simultaneously have a proficient status in all of the events listed in the MSP Attain Table for that Mission Skill. All 3000 phase Basic POI events shall be listed in the Attain table under the applicable Mission Skill.

b. MSP Maintain Table Events. Events in MSP Maintain Tables consist of events required for experienced individuals to maintain proficiency in each Mission Skill. To maintain Individual MSP, an individual must maintain a proficient status in all of the events listed in the MSP Maintain Table for that Mission Skill. Communities shall consider the entire T&R to include event complexity, event conditions (day, night, ATC non-radar, severe weather), R-coding, event chaining, event refly, etc. when determining MSP Maintain requirements.

c. The following rules apply when updating/developing Attain and Maintain CSP tables.

- All Mission Skills shall be represented in the Attain and Maintain MSP tables
- All 3000 phase events shall be listed in the Attain table under the applicable Mission Skill
- All events in the Attain table that are not listed in the Maintain table shall be chained by event(s) in the Maintain Table unless the event(s) is not assigned a refly interval (one time training requirement)
- The Maintain table shall contain at least one event for each Mission Skill
- Events in the Maintain table shall be R-coded (Refresher POI) events
- Events in the Mission Skills Attain and Maintain Tables may chain update events in the Core Skills Attain and Maintain Tables

During a T&R review, SMEs shall consider the following regarding T&R events in the MSP Attain table that are not chained by event(s) in the MSP Maintain table:

- Such events must not be assigned a refly factor ('*' listed for refly factor)

or

- Such events must be moved to the MSP Maintain table

or

- Such events must be moved out of the Mission Skill phases (3000) to another phase (4000+)

or

- Such events must be deleted from the syllabus

e. Individual MSP format shall be as follows:

X03. <u>INDIVIDUAL MISSION SKILL PROFICIENCY (MSP) REQUIREMENTS</u>. A MSP crew consists of individuals representing each crew position who have achieved and currently maintain Individual MSP. To be considered proficient in a Mission Skill, an individual must attain and maintain proficiency in Mission Skill events as delineated in the below paragraphs.

1. <u>Events Required to Attain Individual MSP</u>. To initially attain MSP in a Mission Skill, an individual must simultaneously have a proficient status in all 3000 phase T&R events listed for that Mission Skill:

Individual Mission Skill Proficiency Attain Table

MOS/Billet/Crew Position	***MS1***	***MS2***	***MS3***	***MS4***	***MS4***	***MS5***	***MS6***	***MS7***
T&R events required to Attain Mission Skill Proficiency	*S3100R*	*S3200R*	*S3300R*	*S3400*	*S3500R*	*S3600*	*S3700R*	*S3750R*
	3101	*3201*	*3301*	*3401R*		*3601R*	*3701*	*3751R*
	3102R	*3202R*	*3301*			*3602*	*3702*	
	3103		*3303R*			*3603*	*3703R*	
	S3104					*3604R*		
	3105R							

R = Refresher POI
S = Event Conducted in Simulator

2. Events Required to Maintain Individual MSP. To maintain MSP in a Mission Skill, an individual must maintain proficiency in all 3000 phase T&R events listed for that Mission Skill:

NOTE

Specific Maintain events are selected by community SMEs to update corresponding skills in the Attain table. Maintaining proficiency in these select events will ensure the individual will never go delinquent in that corresponding skill in the Attain table.

Individual Mission Skill Proficiency Maintain Table								
MOS/Billet/Crew Position	MS1	MS2	MS3	MS4	MS4	MS5	MS6	MS7
T&R events required to Maintain Mission Skill Proficiency	S3100R		S3300R		S3500R			
				3401R				3751R
		3202R						
			3303R				3703R	
						3604R		
	3105R							
R = Refresher POI S = Event Conducted in Simulator								

3. Events Required to Attain Individual Proficiency in Core Plus Skills. Proficiency in Core Plus Skills is not required to obtain unit CSP. Training to Core Plus Skills is at the discretion of the unit commanding officer. To initially attain proficiency in a Core Plus Skill, an individual must simultaneously have a proficient status in all T&R events listed for that Core Plus Skill:

Individual Core+ Skill Proficiency Attain Table					
MOS/Billet/Crew Position	CS+1	CS+2	CS+3	CS+4	CS+5
T&R events required to Attain Core+ Skill Proficiency	S4100R	S4200R	S4300R	S4400	S4500R
	4101	4201	4301	4401R	
	4102R	4202R	4301		
	4103		4303R		
	S4104				
	2405R				
R = Refresher POI S = Event Conducted in Simulator					

4. Events Required to Maintain Individual Proficiency in Core Plus Skills. To maintain proficiency in a Core Plus Skill, an individual must maintain proficiency in all T&R events listed in the table below for that Core Plus Skill:

Individual Core+ Skill Proficiency Maintain Table					
MOS/Billet/Crew Position	CS+1	CS+2	CS+3	CS+4	CS+5
T&R events required to Maintain Core+ Skill Proficiency	S4100R				S4500R
				4401R	
		4202R			
			4303R		
	2405R				
R = Refresher POI S = Event Conducted in Simulator					

9. Certifications, Qualifications and Designations. All certification, qualification, and designation requirements and specific criteria to achieve them shall be delineated in community T&R manuals. Commanders may issue certification, qualification or designation letters when individual personnel complete applicable training requirements. A copy of these letters shall be included in section 4 of Individual Performance Records per Chapter 2. Only after successfully completing qualification or designation requirements and being issued a qualification/designation letter signed by the commanding officer will an individual be considered qualified or designated. Do not confuse certifications with qualifications or designations as defined below.

a. Certification

(1) A certification refers to the completion of an evaluation process conducted during syllabus event(s) by a designated instructor or authorized personnel for the purpose of ascertaining proficiency of a crewmember as a prerequisite to qualification or designation.

(2) For Aviation Ground Communities. A certification serves to ascertain one-time proficiency evaluation for a given position. Commanders shall issue certification letters.

b. Qualification. A qualification is a status ('qualified' or 'not qualified') assigned to personnel based on demonstration of proficiency in a specific skill. Individuals do not lose a qualification as a function of refly factor for individual events. However, loss of proficiency (delinquent refly factor) for all associated qualification events (events with measurable refly factor) constitutes loss of that qualification. Re-qualification requires demonstration of proficiency and shall be achieved by successfully repeating all R-coded events associated with the respective qualification (unless waived per paragraph 207).

c. Designation. A designation is a status assigned to an individual based on leadership ability. Designations are command specific and remain in effect until removed for cause or the individual is transferred to another command. T&R syllabi shall refer to the MAWTS-1 Course Catalog, NATOPS, and other applicable directives for instructor designation criteria.

(1) Designation Criteria. Aviation communities shall delineate community standardized criteria to achieve all designations in individual T&Rs. Designation criteria (to include workup/evaluation events) shall be evaluated (E-coded) events and shall not have CRP value attached. Criteria for instructor designations shall be delineated in the 5000 phase (Instructor Training); criteria for all other

designations shall delineated in the 6000 phase. Community T&Rs may stipulate re-designation criteria; if re-designation criteria are not delineated, re-designation is at the discretion of the commanding officer.

(2) Instructor Designations. Instructor designations are assigned to personnel based on ability to conduct ground and/or airborne instruction of a Core Skill or mission area. Instructor designations are designed to enhance standardization and safety while training unqualified personnel in specific skills. T&R instructor designation/re-designation requirements should be consistent with, and may reference instructor requirements listed in the MAWTS-1 Course Catalog, NATOPS, and other applicable directives.

d. Certification, Qualification and Designation Tables. All MOS qualifications and designations shall be listed in these tables. These matrices shall consolidate/list criteria and event requirements to achieve each individual qualifications and designations. T&R events required for re-qualification, shall also be delineated in these matrices. Qualification and Designation tables format shall be as follows:

X04. CERTIFICATION, QUALIFICATION AND DESIGNATION TABLES. The tables below delineate T&R events required to be completed to attain proficiency, and initial qualifications and designations. In addition to event requirements, all required stage lectures, briefs, squadron training, prerequisites, and other criteria shall be completed prior to completing final events. Certification, qualification and designation letters signed by the commanding officer shall be placed in Individual Performance Records (IPR). Loss of proficiency in all qualification events causes the associated qualification to be lost. Regaining a qualification requires completing all R-coded syllabus events associated with that qualification.

INDIVIDUAL CERTIFICATION REQUIREMENTS	
Certification	*Event Requirements*
1.1.1.1 List by title each certification	*List all requirements to include events and governing directive*
1.1.1.2	
This certification table is currently used by aviation ground communities only.	

INDIVIDUAL QUALIFICATION REQUIREMENTS	
Qualification	Event Requirements
1.1.1.3NATOPS	IAW OPNAV 3710.7
1.1.1.4Inst	IAW OPNAV 3710.7
QUAL 1	S2400R, 2401R, 2406, 2407, 2408R
DAY CQ	6130R
NIGHT CQ	6140R
QUAL 2	S2301R, S2302, 2303, 2304, 2305, 2306R
QUAL 3	S2301, 2302, 2303R, 2304, 2305R
QUAL 4	4100, 4101R, 4102R
QUAL 5	3800, 3801R, 3802R, 3803, 3804, 3805R
QUAL 6	3900R, 3901R
R = Refresher POI events required for re-qualification	

INDIVIDUAL DESIGNATION REQUIREMENTS	
Designation	Event Requirements
SECT LD	6400, 6401, 6402, 6403, 6404, 6405, 6406, 6407, 6408, 6409R. The IUT shall be complete with all 2000 and 3000 phase sorties prior to beginning section lead workup.
DIV LEAD	6500, 6501, 6502, 6503, 6509R
MSSN CDR	6700, 6701, 6709R
LAT(I)	IAW the MAWTS-1 Course Catalog.
ACT(I)	
NS(I)	
WTI	

10. Programs of Instruction (POI). A POI is a group of events within a syllabus that an individual is required to perform; a POI can be thought of as a subset of a T&R syllabus. There are four POI categories; Basic (B), Series Conversion (SC), Transition (T), and Refresher (R). Individuals are assigned to one POI at any given time. Events within a POI are annotated in both the event description and the T&R Syllabus Matrix with a 'B,' 'SC,' 'T,' or 'R'.

a. Basic (B). The POI prescribed for newly designated personnel.

b. Series Conversion (SC). The POI prescribed for personnel converting from a particular series of aircraft or MACCS system to a new series that has significantly different aircraft or weapons systems characteristics e.g., KC-130FRT to KC-130J.

c. Transition (T). The POI prescribed for personnel changing aircraft/platform type per paragraph 203.

d. 'B', 'SC' and 'T' POIs should include all training required to achieve an MOS if applicable (CNATRA and OPNAVINST 3710.7 training is understood and does not need to be listed). An individual is assigned to the 'B', 'SC' or 'T' POI of a T&R syllabus one time only, at the beginning of the individual's first fleet tour in a particular MOS. These POIs are similar in that they contain events an individual requires to initially attain proficiency in a MOS.

e. Refresher (R)

(1) After completion of a 'B', 'SC' or 'T' POI, the individual is assigned to the Refresher POI of that MOS syllabus, and remains in the Refresher POI throughout the individual's career while assigned to that MOS. The Refresher POI is unique in that it contains events required to regain and maintain proficiency in an MOS.

(2) The Refresher POI is prescribed for personnel returning to an operational force billet who were previously assigned and completed the B/T/SC POI of that MOS syllabus. Refresher syllabi account for previous experience and normally have fewer required 2000 through 4000 phase events than Basic POIs. Refresher POIs contain appropriate training events that an average experienced individual is required to complete to regain and maintain individual CSP in all T&R Core Skills. The Refresher POI is closely related to the individual CSP Maintain tables in that events in these tables must be in the Refresher POI. However, there may be Refresher events not included in the CSP Maintain table because a community may determine that in addition to events required for maintaining CSP there are events required to regain CSP in a Core Skill.

(a) If an individual loses proficiency in all events in a Core Skill or a Mission Skill, the individual is required to complete all R-coded events in that Core Skill or Mission Skill. For example, a community determines that six events are required to attain proficiency (2500-2505) and one event is required to maintain proficiency (2505R) in the Night Systems (NS) Core Skill (see figure 6-X). The community decides that three events are required to regain proficiency (2501R, 2502R, and 2505R) in the NS Core Skill. In this example, if an individual goes delinquent in NS-2505R, the individual is required to complete NS-2501R, NS-2502R, and NS-2505R to regain proficiency in the NS Core Skill.

One event required to maintain NS proficiency (NS-2505R):

Individual CSP Maintain Table								
Pilot	FAM	AAR	LAT	AS	NS	AA	CAS	AR
T&R event requirements to maintain CSP	S2100 2102R	2201R	S2301R	2405R 2408R 2409R 2410R	**2505R**	2604R	3703R 3705R 3706R	3755R

Three events required to regain NS proficiency (NS-2501, NS-2502, and NS-2505):

STAGE	TRNG CODE	FLT HOURS	SIM HOURS	REFLY/NTVL	POI	EVAL	TYPE	TOTAL #	CONDITIONS	PREREQ	EVENT DESCRIPTION	CHAINING	EVENT CONV
										NS			
SNS	2500		1.0	*	B		S		NS	2404	SENSORS SIM		311
SNS	2501		1.0	*	**R**		S		NS	2500	BCWD PROFILES SIM	2500,2401	230
NS	2502	1.3		180	B,R		A	2	NS	2501	FAM / FORM	2501	232
NS	2503	1.3		*	B		A	2	NS	2502	LGB / GPS	2502,2501	313
NS	2504	1.3		*	B		A	2	NS	2503	20/30 DIVE / TRANSITION		234
NS	2505	1.3		*	B,R		A	2	NS	2504	TGT AREA MECHANICS (VIS/PGM)	2504,2503,2502, 2501	235
		5.2	2.0										

Figure 6-1.--Refresher POI Example.

(b) Pilots and NFOs who have not flown their model aircraft within a prescribed time interval are required to complete 100 level FRS Refresher training per paragraph 405 prior to being assigned to an operational squadron.

f. POI categories exist to standardize differing training requirements based on MOS experience of an average individual in each category. For example, 'individual A' has no previous MOS experience and was recently assigned to a unit; 'individual B' has 10 years of experience in that MOS and has been assigned to the same unit for 2 years. Obviously, individual A has different training requirements than individual B; therefore, individual A is assigned to the Basic POI, and individual B is assigned to the Refresher POI.

g. Series Conversion, Transition, and Refresher POIs normally contain fewer required training events than Basic POI to account for previous experience.

h. Applicable POIs shall be listed in the following order: Basic, Series Conversion, Transition, Refresher and Flight Leadership (as applicable). For each POI outline, include all required courses and levels of training required to complete the POI. POI format shall include the following columns: (1) Duration of training/length of time for each course or level noted listed in days, weeks, or months; (2) "Course/Level" - Title of the course or level, as applicable; (3) "Activity" - name of activity/command responsible for the training. POI format shall be as follows:

X05. (MOS OR BILLET) PROGRAMS OF INSTRUCTION

1. Basic POI

WEEKS	*COURSE/LEVEL*	*ACTIVITY*
1-33	*Core Skill Introduction Training (CAT I/II)*	*FRS*
34-58	*Core Skill Basic Training*	*Tactical Squadron*
59-82	*Core Skill Advanced Training*	*Tactical Squadron*
83-88	*Core Plus Training*	*Tactical Squadron*

2. Refresher POI

WEEKS	*COURSE/LEVEL*	*ACTIVITY*
XX-XX	*Core Skill Basic Training*	*Tactical Squadron*
XX-XX	*Core Skill Advanced Training*	*Tactical Squadron*
XX-XX	*Core Plus Training*	*Tactical Squadron*

i. Flight Leadership POIs. Tactical flight communities shall implement community standardized flight leadership POIs for the following designations: Section Leader, Division Leader, Flight Leader, Mission Commander/Air Mission Commander, and Refueling Area Commander (Appendix H).

(1) POI Content. Flight leadership POIs shall ensure aircrew are trained and evaluated in the skills and missions that the aircrew will be expected to lead once designated.

(2) Flight leadership POIs shall be delineated in the 6000 Phase.

(3) Flight leadership POIs shall include both skill-based and MET-based events. These events shall encompass the conditions that are specified in each community Core METL.

(4) Flight leadership POIs shall specify appropriate administrative and tactical flight leader requirements as stated in SOPs (e.g., NORDO approach, system malfunctions, non-standard departures/recoveries, etc.).

(5) Community flight leadership POIs shall delineate academic requirements that include self-paced readings, chalk talks, and lectures applicable to the respective flight leadership designation. Flight leader academic requirements should include the following:

(a) Flight lead mission planning considerations.

(b) Flight leader application of TTPs.

(c) Operational Risk Management (ORM) and Crew Resource Management (CRM).

(d) Standard Operating Procedures (SOPs).

(6) Simulator training shall be incorporated into the flight leadership POIs to the maximum extent practical. Simulator training requirements vary among aviation units based on simulator capabilities, physical location, and training needs. Flight leadership POIs shall include simulator training requirements that reflect current simulator facility capabilities and training goals.

(7) Flight leadership POIs shall delineate prerequisites appropriate to the respective Flight Leadership designation. Flight leadership prerequisites shall state whether the requirement applies to commencement of the flight leadership POI, certification event or designation.

(8) At a minimum, prerequisites must ensure that the prospective flight lead has demonstrated proficiency in all events that the designatee could be expected to lead.

(9) Completion of 2000 and 3000 phases shall be a prerequisite to commencing the Section Leader POI. Exceptions shall be delineated in the community Section Lead POI.

(10) Communities shall delineate appropriate qualification and designation prerequisites.

(11) Community Aircraft Commander designations shall be a prerequisite to commencing the Section Leader POI.

(12) The last event performed in each T&R flight leader POI shall be a flight event.

(13) Communities shall establish flight leadership tracking codes in the 6000 phase which are intended to be used as a tool for ORM and training management purposes.

(14) Communities shall R-code POI events required to regain flight leadership proficiency per paragraph 216.

(15) Community flight leadership POI event requirement and performance standard descriptions shall be commensurate with flight leadership criteria. Flight event descriptions shall include event requirement accomplishment criteria to determine whether the prospective flight lead completed the event. The

prospective flight lead shall use the performance standards to debrief the flight. The following shall be considered when developing flight leadership POI event Requirement and Performance Standard descriptions:

(a) Flight Leadership (FL) Requirements

1 Plan, brief, lead, and debrief events.

2 Understand the community T&R and aviation T&R Program Manuals and execute T&R policy.

3 Incorporate ORM in all levels of training.

(b) FL Performance Standards

1 Maintain situational awareness.

2 Make sound administrative and tactical decisions.

3 Safely lead and control aircraft within flight.

4 Adhere to Standard Operating Procedures (SOPs).

5 Demonstrate sound tactical execution.

6 Respond to unplanned circumstances.

7 Communicate intentions to the flight.

8 Accurately recall/reconstruct event and debrief learning points.

(16) See paragraph 603.14 for an example of a flight leadership POI narrative and syllabus format.

11. Academic Training. This paragraph contains a listing of all formal and informal academic or ground instruction that meets requirements for syllabus completion. In addition, recommended academic/ground instruction that complement MOS progression may be listed.

a. Where applicable, include the following statement: "Utilize academic courseware as outlined in the MAWTS-1 Course Catalog."

b. For aviation ground communities, list all skills enhancement formal courses that fulfill training requirements.

c. Academic training format shall be as follows:

X06. ACADEMIC TRAINING

1. Academic training shall be conducted for each phase/stage of the syllabus. Where indicated, standardized academic training materials exist and may be obtained from the sponsoring activity.

2. External academic courses of instruction available to complete the syllabus are listed below:

COURSE	*ACTIVITY*
Marine Air Traffic Control Officer Course	*NATTC, FL*
Weapons and Tactics Instructor Course	*MAWTS-1*
Marine ATC Mobile Team Leaders Course	*MAWTS-1*
Joint Air and Space Operation Center (AOC) Initial Qualification Training (IQT); Airspace Course	*Hurlburt Field, FL*
Multi-TDL Advanced Joint Interoperability Course	*Fort McPherson, GA*

12. Syllabus Notes. This paragraph should include all notes, policies, and guidelines applicable to the syllabus. Essential information pertaining to the entire syllabus should be explained in detail in this paragraph.

X07. SYLLABUS NOTES. List notes, policies, and guidelines applicable to the T&R syllabus if required.

13. T&R Syllabus Format. Aviation T&R manuals contain syllabi that apply to a specified aviation community. A T&R syllabus refers to all events that apply to a specified aviation MOS/crew position.

a. Example: An aircrew syllabus exists for each crew position within each aircraft. For the F/A-18D, there are two syllabi defined - the pilot and the WSO. Because T&R manuals are generally separated by aircraft model, all syllabi that apply to the F/A-18 model aircraft (F/A-18A Pilot, F/A-18C Pilot, F/A-18D Pilot and F/A-18D WSO) will be contained in the F/A-18 T&R Manual.

b. Syllabus structure. T&R syllabi are constructed using a tiered progression of increasingly challenging training events. T&R syllabi are divided into phases, which are subdivided into stages and events as described below:

PHASES are subdivided into STAGES

STAGES contain grouped "like" events

Phase - A group of stages/events delineating one of the T&R syllabus phases (0000, 1000, 2000, 3000, 4000, 5000, 6000, 7000, and 8000)

Stage - A group of similar T&R events Core or Mission Skill events) in numerical sequence within a phase (RDR, TWR, MMT, etc.).

Event - A training evolution required within a syllabus.

c. Community SMEs shall update/construct T&R syllabi per the following guidelines:

(1) Event. The basic building block of training in Marine Aviation is an event. Events delineate specific tasks that must be successfully performed (what the individual must accomplish), and measurable levels of performance for each task (how well each task must be performed). Each event has a unique four-digit numeric training code (e.g., 2014) assigned to it. Events are displayed along with the Core Skill/Mission Skill name acronym (e.g., TERF-2014). Several terms are often used interchangeably to refer to an event (e.g., 'Event,' 'Training Event,' 'T&R Code,' 'Training Code,' etc.).

(2) Stage. A stage is a group of one or more events within a phase. Each stage is categorized and named by Core Skill (e.g. Terrain Flight or TERF). Aviation flight communities should follow stage titles standardized terminology established in Appendix C. A stage may not contain events from more than one phase, although the same stage/Core Skill name may be used in more than one Phase (e.g., a 2000 Phase TERF stage and a 3000 Phase TERF stage).

(3) Phase. A phase is a standardized group of events that share the same first digit and are organized as described below:

(4) Core Phase

(a) Core Skill Introduction FRS Academic Phase (0000 phase). This training includes FRS oriented academics.

(b) Core Skill Introduction Phase (1000 phase). This training includes fundamental system/equipment operation familiarization, initial crew procedures, and initial exposure to Core Skills. Core Skill Introduction training may also include aircrew Refresher, Series Conversion, and Transition training. Aviation Ground personnel receive all 1000 Phase training at their respective entry-level MOS schools. At the completion of this phase, individuals are normally assigned to operational units. CNATRA, FRSs, and/or operational units conduct aircrew Core Skill Introduction training. Entry-level MOS schools and/or the crewmember's first operational unit conduct aviation ground unit and MACCS personnel training.

(c) Core Skill Phase (2000 phase). This phase includes Core Skill training essential to wartime employment of the unit platform/system. Training at this level enhances proficiency from fundamental understanding of Core Skills to proficiency in basic required Core Skills. Individuals should normally complete this phase of training within the first year of assignment to a fleet aviation unit. Aviation flight units will normally train aircrews through this phase prior to overseas assignment.

(d) Mission Skill Phase (3000 phase). This phase contains advanced Core Skill training. It increases proficiency in basic Core Skills and develops mission-level leadership that leads to combat qualifications and leadership designations. Crews proficient in this phase of training should be capable of planning/leading/directing flights of numerous aircraft in a contingency operation or crews within command and control or aviation ground support agencies.

(e) Core Plus Phase (4000 phase). This phase contains skill training associated with low probability of execution and/or theater specific operations. Although Core Plus training events may provide valuable training opportunities, they are not considered essential to achieve unit Core Competency. Core Plus training is conducted at the discretion of operational commanders and allows unit training flexibility.

(f) Core Competency for operational units resides in the 2000-3000 training phases. Mastery of 2000-3000 phases results in highly trained personnel who contribute to the unit's overall warfighting capability and enables a combat unit to accomplish its assigned mission. Fleet units shall emphasize individual proficiency in 2000-3000 phase Skills. In some instances, certain Core Plus skills may be deemed essential depending on mission requirements and may be considered Core Skills for pre-deployment readiness determination. Only the MAW or MAGTF commander may "re-designate" a Core Plus Skill to the Core Skill phase for readiness reporting purposes. M-SHARP shall afford an automated means to affect this adjustment within the training management system.

(5) Additional Phases. These phases are reserved for Instructor syllabi, Requirements and Certification, Qualification and Designation syllabi, and academic event tracking. Events in these phases shall not have CRP credit assigned.

(a) Instructor Training Phase (5000 phase). This phase contains instructor workup and evaluation certification syllabus events. This phase will

also contain instructor workup and certification syllabus events as applicable for Contract Instructors (CI) who instruct simulator events.

(b) Requirements, Certifications, Qualifications, Designations (RQD) Phase (6000 phase). This phase contains all other syllabus events and special interest tracking codes that do not neatly 'fit' into the above phases and is designed to facilitate training management. The 6000 phase contains standardized combat/flight leadership workup and evaluation events. This phase often contains event requirements not mandated by the T&R program such as NATOPS, instrument evaluations, and the functional check pilot syllabus.

1 RQD codes are not events but codes used to facilitate community training management that may be used in the 6000 phase if M-SHARP does not otherwise handle the specific instance that the community wishes to track. For example, RQD codes may be established to monitor execution of specific instances of strategic air refueling (if no Strategic Air Refueling T&R event exists), arctic weather events, specific exercise sorties, etc.

2 M-SHARP functionality eliminates the need for tracking codes related to the possession of qualifications, designations, certifications (Appendix C); flight cancellation codes (no takeoff) or airborne abort cancellation codes (T&R code specific); and ordnance expenditure. All of these can be logged and reported within M-SHARP and therefore shall not be authorized as tracking codes.

d. T&R Syllabus Format

(1) The phases shall be delineated in the following sequence:

X08. CORE SKILL INTRODUCTION FRS ACADEMIC PHASE
X09. CORE SKILL INTRODUCTION PHASE
X10. CORE SKILL PHASE
X11. MISSION SKILL PHASE
X12. CORE PLUS PHASE
X13. INSTRUCTOR TRAINING PHASE
X14. REQUIREMENTS, CERTIFICATIONS, QUALIFICATIONS, DESIGNATIONS (RQD) PHASE

(2) Phase/Stage Format. Phases and subsequent stages shall be formatted and numbered as follows:

X08,X09,X10,X11,X12,X13,X14 etc. (NAME OF PHASE)

1. General. Required. List policies, notes, and guidelines applicable to all phase events. List applicable phase prerequisites.

a. Stages. Required for 1000-4000 phases. Lists stages in the order they occur in the phase.

2. Stage Title. Stage abbreviations shall be used and shall follow standard abbreviations per the Core Skill Abbreviations table.

a. Purpose. Required. Describe the stage function/purpose.

b. General. As applicable. List policies, notes, and guidelines applicable to all stage events. List applicable stage prerequisites. Denote the level of performance desired by the end of the stage if the specific flights/events do not describe the required level of performance.

c. Crew Requirements. As applicable. State which crewmembers are required. Specific crew requirements may be identified in individual events if appropriate.

d. Academic Training. As applicable. List ground instruction required in this stage. For tactical flight communities, where applicable, include the following statement: "Utilize academic courseware as outlined in the appropriate Type/Model/Series chapter of the MAWTS-1 Course Catalog."

e. Total Training Events. Required. Note the total number of events for each stage as follows:

(1) Total Training Events. Live - XX events, XX hours; Simulated XX events, X.X hours. (Aviation Ground Communities)

or

(1) Flight and Simulator Event Training. Flight - XX events, X.X hours; Simulator - XX events, X.X hours. (Tactical Flight communities)

(List all stage events per the below format)

(3) Event Format. Following the subparagraphs for each stage, list all events within the stage in numerical order per the below format. The notes below describe how entries are to be developed:

1/ 2/ 3/ 4/ 5/ 6/ 7/ 8/ /9

FAM-3000 2.0 180 B,SC,R E 1 KC-130 A (N)

10/ *Goal.* Required entry.

11/ *Requirement.* Required entry.

12/ *Performance Standard.* Required entry.

13/ *Prerequisite.* As applicable entry.

14/ *Ordnance.* As applicable entry.

15/ *Range Requirement.* As applicable entry.

16/ *External Syllabus Support.* As applicable entry.

17/ *Reference.* Optional entry.

NOTES:
1/ Stage-Training Code
2/ Projected Event Duration
3/ Refly Factor
4/ Programs of Instruction
5/ Evaluation
6/ Device Number
7/ Device Type
8/ Device Options
9/ Event Conditions
10/ Goal
11/ Requirement
12/ Performance Standard

13/ Prerequisite
14/ Ordnance Requirement
15/ Range/Target Requirement
16/ External Syllabus Support
17/ References

NOTE

Event information shall be consistent with and summarized in the T&R Syllabus Matrix (paragraph 15 below).

1/ Stage-Training Code. Stage abbreviations shall be used and shall follow standard abbreviations per Appendices A and B or the Core Skill Abbreviations table, as applicable. A unique numeric four-digit training code shall be assigned to each syllabus event. The first digit of the event training code shall begin with the appropriate phase series number (Core Skill Introduction events = 1XXX; Core Skill events = 2XXX; etc.). The second digit of a T&R code refers to the stage. The third and fourth digits refer to the individual events within a stage, in sequence. Example: a hypothetical "TERF" stage may consist of the following events: 2100, 2101, 2102, 2103, and 2104. The 2200 event would indicate the start of the next stage, such as CQ-2200. If more than 10 stages exist within a phase, communities may split hundreds and tens into a logical progression. Number as follows:

Core Skill Introduction FRS Academics	0000-1099
Core Skill Introduction	1100-1999
Core Skill Academics	2000-2099
Core Skill	2100-2999
Mission Skill Academics	3000-3099
Mission Skill	3100-3999
Core Plus Academics	4000-4099
Core Plus	4100-4999
Instructor Training Academics	5000-5099
Instructor Training	5100-5999
RQD* Academics	6000-6099
RQD*	6100-6999
Reserved for future use	7000-7099
Reserved for future use	7100-7999
Additional Academics	8000-8999
Reserved for future use	9000-

*Requirements, Certifications, Qualifications, and Designations

2/ Projected Event Duration. Projected event duration should reflect the average time to execute the event requirement (actual time to execute the event may vary). Transit time may be added to the event duration. Projected event durations should be listed in applicable columns in the matrix (flight, live, simulator, etc.) and be stated in hours.

3/ Refly Factor. Refly (proficiency interval) factors reflect the maximum time between syllabus events. Refly factors shall be delineated in days for flight units; aviation ground units normally use months. An asterisk (*) indicates the event has no refly interval, indicating a one time training requirement (unless R-coded).

4/ Programs of Instruction (POI). List the applicable POI(s) using the abbreviations below:

B = Basic
SC = Series Conversion
T = Transition
R = Refresher
FLSE = Flight Leadership Standardization Evaluator

For Core Skill Introduction FRS Refresher events (Pilot/NFO, 1000 phase only):
R = Full Refresher program
MR = Modified Refresher
SS = Safe For Solo

5/ Evaluation. An "E" shall be annotated here if the event is required to be evaluated per paragraph 209.

6/ Device Number. List the number of aircraft, system, simulator, or other device(s) required for the completion of the event.

7/ Device Type. List the type of device required for the completion of the event. For simulator events, list the specific type(s) of trainers.

8/ Device Options. For example, "A/S - Aircraft preferred/Simulator optional." Include Command Post, Tactical Environment Network, or other environment conditions that may exist.

Code	Requirement
A	Event performed in aircraft.
L	Event shall be conducted live (conducted in the field/garrison, during an exercise, etc). Requires live (non-simulated) execution of the event.
S	Event performed in simulator or a simulated practical application.
A/S	Event performed in aircraft preferred/simulator optional.
S/A	Event performed in simulator preferred/aircraft optional.
L/S	Event performed live preferred/simulator optional.
S/L	Event performed in simulator preferred/live optional.

Code	Requirement
TEN	Tactical Environment Network.
TEN +	Tactical Environment Network and at least one networked, man-in-the-loop simulator.
CP	Command Post

9/ Event Conditions. Indicate the environmental (Day or Night) or Night Systems conditions required. Options include:

Code	Requirement
D	Shall be flown or conducted during day.
N	Shall be flown or conducted at night (using available night vision devices or flown unaided).
(N)	May be flown or conducted day or night; if at night, available night vision devices may be used or flown unaided.
NS	Shall be flown or conducted at night using available night vision devices.
(NS)	May be flown or conducted day or night; if at night, available night vision devices shall be used.
N*	Event Shall be flown or conducted at night unaided.
(N*)	Event may be flown or conducted at night; if at night, shall be flown unaided.

10/ Goal. State the terminal learning objective.

11/ Requirement. List specific tasks for the event; indicate what the individual must accomplish.

12/ Performance Standard. Describe measurable level of proficiency for the event.

13/ Prerequisite. A prerequisite is a requirement that must be successfully completed prior to commencing another (generally more complex) training requirement. Prerequisites are training requirements used to implement a building block approach to training. Omitting or skipping event prerequisites is prohibited (unless the prerequisite is waived).

Prerequisites can be separated into several different types including academic, event, stage, phase, certification, qualification, and designation. The most common type of prerequisite is the requirement to complete a specific event before beginning the execution of another event. However, a prerequisite may also direct the completion of an entire stage, a specific academic requirement, or even the maintenance of a specific qualification or designation prior to commencing an event. Just as an event may have prerequisites, academic classes or lectures, events, stages, phases, qualifications, and designations all may have prerequisites. For example, it is possible to assign an event as a prerequisite for commencing a stage, just as it would be possible to require stage completion as a prerequisite for an event. Aviation units may use any combination or number of these prerequisites to tailor training as appropriate.

Academic Prerequisite. "Knowledge-based" information (often a class or lecture) that must be imparted to, or gained by the student prior to commencing

another training requirement in an academic prerequisite. For example, the LAT lecture series may be a prerequisite to commencing the LAT stage.

Event Prerequisite. A T&R event that must be completed prior to commencing another training requirement is an event prerequisite. In addition, event prerequisites may further be refined depending on conditions as follows.

Night optional prerequisite conditions may exist for night optional T&R events and are annotated with parentheses around the event [e.g. (2100)] or with "DAY" after them (e.g. 2100 DAY). A prerequisite annotated with parentheses must be previously completed only if the scheduled night optional T&R event is actually conducted at night. A prerequisite annotated with "DAY" must be previously completed only if the scheduled night optional T&R event is actually conducted during the day. As an example, if 2130 is a night-optional event and its prerequisites are listed as "2120, (2121), 2122 DAY," the following applies:

- If event 2130 is conducted during the day, prerequisites that apply are 2120 and 2122 only.
- If event 2130 is conducted during night, prerequisites that apply are 2120 and 2121 only.

Light level prerequisite conditions may exist for T&R events that can be conducted at night and are annotated with parentheses and "HLL" or "LLL" around the event [e.g. (2100 HLL)]. Prerequisite codes annotated with parentheses and "HLL" after them must be previously completed if the T&R event is flown using night systems during high light level conditions. Prerequisite codes annotated with parentheses and "LLL" after them [e.g. (2100 LLL)] must be previously completed if the T&R event is flown using night systems during low light level conditions. As an example, if 2140 is a night-optional event and its prerequisites are listed as "2130, (2131 HLL), (2132 LLL)," the following applies:

- If event 2140 is flown during HLL conditions, prerequisites that apply are 2130 and 2131 only.
- If event 2140 is flown during LLL conditions, prerequisites that apply are 2130 and 2132 only.

Stage Prerequisite. A T&R stage that must be completed prior to commencing another training requirement is a stage prerequisite. For example, a community may require a specific stage to be completed as a prerequisite for an event.

Phase Prerequisite. A T&R phase that must be completed prior to commencing another training requirement is a phase prerequisite. For example, completion of the 1000 phase is normally a prerequisite to commencing the 2000 phase training.

Certification Prerequisite. For Aviation Ground only. A certification that must be completed prior to completing another raining requirement is a certification prerequisite. For example, a LAAD Platoon Commander certification is normally a prerequisite to commencing Battery/Battalion training.

Qualification Prerequisite. A qualification that must be completed prior to commencing another training requirement is a qualification prerequisite. For example the NSQ HLL qualification is normally a prerequisite to commencing NSQ LLL qualification training.

Designation Prerequisite. A designation that must be completed prior to commencing another training requirement is a designation prerequisite. For example, the Section Leader designation is normally a prerequisite to commencing Division Leader designation training.

For events with device options, prerequisites may be specified by device type. For example, if a T&R code 2123 can be conducted in a simulator or in an aircraft, 2123 may have no prerequisite if conducted in the simulator, but if conducted in the aircraft prerequisites may apply.

14/ Ordnance Requirement. Ordnance shall be specified in a table format to identify primary ordnance requirements and quantity with allowable substitutes if applicable. A list of ordnance types may be viewed at the CG TECOM ATB website at https://www.intranet.tecom.usmc.mil/sites/atb/default.aspx .

* There may be instances where a specific quantity and type of ordnance is required by POI, i.e. Basic or Refresher. In those instances the POI shall be identified in a separate column prior to the ordnance column.

ORDNANCE				
POI*	**ORDNANCE**	**QUANTITY**	**ALLOWABLE SUBSTITUTES**	**NOTES**
*Basic**	*GBU-31*	*1*	*GBU-38/32*	
*Refresher**	*GBU-16*	*2*	*GBU-10/12*	
	RR-129	*60*	*RR-144*	
	SM-875 STUF	*60*	*MK-32*	

15/ Range/Target Requirement. List all range/target capabilities required to complete the event, if applicable. Range/target capability acronyms, derived from a standard list, shall be used. The standard list of range/target capabilities (currently under development) may be viewed at the CG TECOM ATB website at https://www.intranet.tecom.usmc.mil/sites/atb/default.aspx .

Format example:

Range Requirements		
Required Capabilities	*Allowable substitutes*	*Desired Capabilities*
RSTD		*SST, EW, TGTDISP, EXP*
TGT	*NBDS*	
URBN WPNS		
JCAS		
JDAM		

Target Requirements		
Required Capabilities	*Allowable substitutes*	*Desired Capabilities*

16/ External Syllabus Support. List additional training resource requirements and/or external support required to complete the event, (e.g., adversary support, tanker support, etc) if applicable. For example, *CAS - FAC(A) with X number of mortar/arty/rockets for marking;*

dissimilar FW adversary F-18/F-5 etc. List other critical training resources required to achieve T&R requirements.

17/ References. If preferred, state references that are required or support accomplishment of the event.

14. T&R Flight Leadership POI and Syllabus Format Example

X. FA-18 Section Lead POI (DESG)

a. Purpose. To prepare and evaluate the prospective section lead's ability to plan, brief, lead and debrief an event as a section lead.

b. General

(1) Prospective section leads shall conduct the following day and night workup sorties in order to develop the prospective section lead's flight leadership. All prospective section lead DESG events shall be evaluated by a designated division lead or higher. Three Section Lead events (2 air-to-surface flights and 1 air-to-surface simulator) shall be evaluated by a MAG Flight Lead Stan Evaluator.

(2) The section lead evaluator will use the sortie requirement accomplishment and performance standard criterion to determine whether the prospective flight lead completed the sortie. Completion of the section leader POI and certification of an FLSE meets the requirements for designation as section leader. At the discretion of the squadron commanding officer, a letter designating the pilot as section leader shall be placed in the NATOPS jacket and APR. Aircraft should be configured with operable VTR/CVRS, ALQ-126B, ALR-67, KY-58, TPOD, MIDS, CIT, DCS/VMF, and LDT when required.

(3) Prospective section leads shall be complete with all 2000 and 3000 phase events, except FAC(A) and TAC(A) for FA-18D crews, as a prerequisite to beginning the section lead syllabus (DESG 6120-6131).

c. Academic Training. All requirements delineated in the matrix below shall be completed prior to the section leader POI completion event.

SELF PACED READINGS		DATE COMP
USMC ADMIN SOP		
USMC FA-18 TACSOP		
TG MAN, CH. 14: THREAT EW		
REQUIRED CHALK TALKS	**DATE COMP**	**INSTRUCTOR**
A/A TIMELINE CONSTRUCTION		
A/G TIMELINE CONSTRUCTION		
MISSION PLANNING SYSTEMS		
ATTP		
REQUIRED LECTURES	**DATE COMP**	**INSTRUCTOR**
FA-18 SACT		
FA-18 EW SUITE		
FA-18 TARGET ATTK PLAN		
TACAIR JMEMS		
FA-18 FIGHTER MISSIONS		
FA-18 MSN EMPLOY 1		

FA-18 MSN EMPLOY 2		
THREAT TACTICS		
FA-18 SELF ESCT TACTICS		
FA-18 HARM TAILORING		
ADMINISTRATIVE FLIGHT REQ	**DATE COMP**	**INSTRUCTOR**
LEAD OVERHEAD BREAK		
LEAD SECTION PAR		
LEAD SIM NORDO APPROACH		
LEAD SIM HUNG ORD APPROACH		
LEAD PAR - NT		
LEAD VIS STR IN - NT		
SECTION LANDING		
INTERVAL TAKEOFF		
SECTION TAKEOFF		
SIMO GO		

d. Flight and Simulator Event Training. Flight - 12 events, 15.0 hours; Simulator - 10 events, 9 hours.

DESG-6200 1.3 E 2 FA-18A/C/D A

Goal. Conduct a 1v1 all-weather intercept sortie to local area training range. Target wingman is a new aircrew recently completed with the FRS and unfamiliar with SOP and local area procedures. Emphasis shall be placed on knowledge of NATOPS, USMC Admin SOP, local course rules, local SOP addendum, and admin flight procedures.

Requirement. Plan, brief, lead and debrief 1V1 intercepts as a section lead. Conduct FAM-2102. Upon successful completion of this event, the IUT shall log both training codes for tracking purposes. Demonstrate comprehensive knowledge and understanding of NATOPS, Admin SOP, TACSOP, and local course rules. The prospective flight lead shall accomplish the following criterion:
Briefs IAW USMC Admin and TAC SOP.
Accurately recall and reconstruct engagements using white board debrief.
Validate all shots.

Performance Standard
Executes intercepts safely IAW OPNAV 3710 and training rules.
Complies with USMC Admin SOP and local course rules.
Adhere to USMC FA-18 Admin SOP.
Maintains proper formation and visual mutual support to and from assigned working area.
Demonstrates proficiency in basic radar mechanics IAW USMC TACSOP.

Prerequisite. 2000 and 3000 phase complete, except FAC(A) and TAC(A)for FA-18D.

Ordnance. CATM-9 and CATM-7/120. 40 Chaff/20 Flare for ALE-39 equipped aircraft/60 Chaff/60 Flare for ALE-47 equipped aircraft.

Range Requirement: MOA, MACH 1+, EXP.

External Syllabus Support. As required for ACM-2402.

15. T&R Syllabus Matrix. T&R syllabus event information shall be transposed in the matrix shown below. T&R Syllabus Matrix information shall be consistent with event information per paragraph 12 above.
Format example:

X15. T&R SYLLABUS MATRIX. The below matrix summarizes T&R syllabus event information.

CH-53 PILOT (MOS 7566)

CORE SKILL 2000 PHASE

The numbers correspond with event information noted in the Event Format section [par. 603.12.d.(3) above]
The letters (A, B, C, D) are additional event information noted below.

1	1	2		3	4	5	6	7	8	9	13	A	B	C
STAGE	TRNG CODE	FLT/LIVE HOURS	SIM HOUR	RFR/Y INTERVAL	POI	EVAL	TYPE	TOTAL #	OPTIONS	CONDITIONS	PREREQ	EVENT DESC	CHAINING	EVENT CONV
CORE SKILL ACADEMICS														
ACAD	2000			*	R,SC							FAM ACAD		
ACAD	2001			730	R							FORM CBT		
FAM														
FAM	2100		1.5	*	B,R,SC		S			(N)		SIM FLIR		200
FAM	2101	1.5		365	B,R		A	1		(N)	2100	A/C FAM		201
FAM	2102		1.5	*	B		S			NS	2101	NS FAM		202
		1.5	3.0											
FORM														
FORM	2200	1.0		365	B,R,SC		A	2				SEC DAY FORM		210
FORM	2201	1.0		180	B,R		A	2		NS	2200	SEC HLL FORM	2200,2102	211
		2.0	0.0											
CAL														
CAL	2300	1.5		365	B		A	1				DAY CAL		220
CAL	2301	1.5		365	B,R,SC		A	2			2300	SEC DAY CAL	2301,2201,2200	221
CAL	2302	1.5		180	B		A	1		NS	2301	HLL CAL	2300,2101	222
CAL	2303	1.5		180	B,R,SC		A	2		NS	2302	SEC HLL CAL	2302,2201,2200,2102	223
CAL	2304		2.0	*	B,R,SC		S		TEN+	NS	2303	HLL HUD		224
		6.0	2.0											
TERF														
TERF	2400	1.5		365	B		A	1				DAY TERF		
TERF	2401	1.5		365	B,R,SC		A	2			2200	SEC DAY TERF	2200	
TERF	2402	1.5		180	B,R,SC		A	1		NS	2201	HLL TERF	2201,2200,2102	
TERF	2403	1.5		180	B,R,SC	E	A	2		NS	2202	SEC HLL TERF	2202,2201,2200,2303	
		6.0	0.0											
PHASE TOTALS														
FLT HOURS TOTAL		15.5	5.0	SIM HOURS TOTAL										

Figure 6-2.--Sample T&R Syllabus Matrix

a. The numbered items in the matrix correspond with numbered event information noted in the Event Format section. Refer to para. 603.12.d.(3) for additional information on these event items.

b. The lettered items (A,B,C) in the matrix contain additional information not previously noted in the syllabus. See table below for description of items:

Letter	Item Name	Item Description
A	Event Desc	This item is optional. List a brief description of the event; acronyms should be used when appropriate.
B	Chaining	List the T&R codes which the event chain updates (chained codes). Event chaining allows for the completion of more complex and/or advanced events using the same skills to update proficiency status of events. When a T&R event is logged, the proficiency dates of other T&R events (usually lower in number) may be updated. The T&R code that is logged is known as the "chaining code," and the updated codes are "chained codes." Chained codes are not always updated when a chaining code is logged. Specific rules determine which events may be updated (see Chapter 2, event proficiency updating). Only events in a sequence entailing demonstration of equivalent skills shall be chained. Delineation of chaining should be an objective process. Only events with similar skill set requirements should be chained. All aspects of an event should be considered when determining chaining. Event conditions, type and number of devices, requirements, performance standards, ordnance requirements, etc., must all be considered when determining equivalent skills and subsequent chaining. For example: CAS-2300 is a day event requiring four CAS runs to be completed in a low threat environment. CAS 2310 is a day event requiring four CAS runs to be completed in a high threat environment. CAS 2320 is a day event requiring PGM employment CAS 2330 is a NS event requiring four CAS runs to be completed in a low threat environment. SMEs may determine 2310 may chain update 2300 as the skill set required in 2310 is equivalent (or more complex) to the skill set required in 2300. Likewise SMEs may determine 2330 may chain update 2300. On the other hand, 2330 may or may not chain 2310 and 2320 depending on the SME assessment of skill set requirements. SMEs may determine 233 should not chain update 2310 and 2320 as different skill sets are required to maintain proficiency in 2310 (high threat environment), 2320 (PGM CAS employment), and 2330 (NS CAS). Communities should be careful not to 'over' or 'under' chain T&R events. A single event should not chain a large number of syllabus events unless such a chaining event specifies equivalent skill requirements in all of the chained events.

Letter	Item Name	Item Description
		Chaining events where equivalent skill training requirements MAY occur is an example of 'over chaining.' For instance, during the conduct of a tactics (TAC) event, training in externals (EXT) may or may not be performed. Unless the TAC event specifies EXT training in the requirements section, the TAC event should not chain other EXT events. Conversely, not chaining events where equivalent skill training requirements occur is an example of 'under chaining.' For instance, a night CAS event should chain a day CAS event if the night CAS event requirements are similar (or more complex) than the day CAS event requirements. Unless the day CAS event specifies unique skill training in the requirements section (the day CAS event has different skill set requirement not contained in the night CAS event), the night CAS event should chain the day CAS event. Conditional Chaining. The following environmental conditions further specify which T&R codes are chain-updated. These conditions shall be annotated per the below in T&R chaining matrices when appropriate. Night Optional. Chained codes annotated with parentheses around them, e.g., (2000), are only chain-updated if the chaining code is conducted at night. Night Systems Optional. Chained codes annotated with parentheses and "NS" after them, e.g., (2000 NS), are only chain-updated if the chaining code is conducted using night systems. Light Level Optional. Chained codes annotated with parentheses and "HLL" after them, e.g., (2000 HLL), are only chain-updated if the chaining code is conducted using night systems during a high light level period. Chained codes annotated with parentheses and "LLL" after them, e.g., (2000 LLL), are only chain-updated if the chaining code is conducted using night systems during a low light level period. Example 1: Event — Events Updated TERF 2200 TERF 2210 — 2200 TERF 2220 — 2200, 2210 This is a simple case where chaining updates events TERF-2200, TERF-2210 when TERF-2220 is completed (assuming 2210 and 2200 indicate 'Proficient'). Event 2200, 2210 and 2220 are daylight TERF events. The skills required in 2210 and 2220 are equivalent skills to lower sequence events and completion of 2210 and 2220 updates lower sequence event proficiency.

Letter	Item Name	Item Description
		Example 2: Event — Events Updated CAL 2200 CAL 2210 — 2200 CAL 2220 — 2200, (2210 NS) CAL 2230 — 2200, (2210 NS), (2220 LLL) This is a different case where chaining codes may not update all chained codes; 2200 is a daylight CAL event; 2210 is an NS CAL event and 2220/2230 are (NS) CAL events. If CAL-2230 is completed, it always updates 2200. However, 2210 will only be updated when 2230 is flown using night systems (NS specific skills), and 2220 will only be updated when 2230 is conducted in LLL conditions (light level specific).
C	Event Conv	List the equivalent event code(s) from the previous T&R syllabus (if applicable). Event conversion refers to the syllabus event proficiency update process via T&R conferences or correspondence change initiatives. Syllabus event conversion is used to convert individual event proficiency status of the previous T&R syllabus into event proficiency status of the current T&R. Similar to chaining, delineation of event conversion codes should be an objective process. Only events with similar requirements and performance standards should be converted. For example, the previous T&R syllabus specified that CAS-230 is a day event requiring four CAS runs to be completed IAW the community TTP and TAC SOP. The new T&R specifies that CAS 2321 is a day event requiring four CAS runs to be completed IAW the community TTP and TAC SOP. 230 may be listed as an event conversion code for CAS 2321. The new syllabus specifies that CAS 2341 is a NS CAS event. CAS 230 should not be listed as an event conversion code for CAS 2341 as different skill sets are required to maintain proficiency in 2341 (Night Systems) than in 230 (day CAS).

16. T&R Syllabus Evaluation Forms. Communities shall develop community standardized evaluation forms for all events contained in their T&R syllabus. T&R syllabus evaluation forms shall be placed in T&R manuals as an appendix or maintained by the syllabus sponsor. If the syllabus sponsor maintains T&R syllabus evaluation forms, the syllabus sponsor shall ensure electronic copies are made available to fleet units.

Syllabus evaluation format shall be as follows:

X16. SYLLABUS EVALUATION FORMS. See Appendix X for syllabus evaluation forms.

or,

X16. SYLLABUS EVALUATION FORMS. Contact (syllabus sponsor) to receive (Crew position/MOS) T&R syllabus evaluation forms.

17. Simulator Mission Essential Subsystems Matrix (MESM)

a. Tactical flight and MACCS communities shall develop simulator-specific Mission Essential Subsystem Matrix(ces) (MESM) for each MOS syllabus that contains simulated events. Subparagraphs shall be added to clarify applicable MESM policy per paragraph 210. MESM format example as follows:

X17. SIMULATOR MISSION ESSENTIAL SUBSYSTEMS MATRIX (MESM)

1. Events designated by an "S" in the event header shall be flown/conducted in a training device equipped to meet the objectives listed in the event description; each event requires specific simulator capabilities. For each individual event, a simulator is categorized as Full Mission Capable (FMC), Partial Mission Capable (PMC), or Non-Mission Capable (NMC) based on the status of mission essential simulator subsystems. The following definitions apply:

a. FMC. All simulator subsystems required to meet the training objectives for the event to be flown/conducted are installed and operating properly.

b. PMC. A simulator subsystem or capability considered highly desirable, but not essential, to meet the training objectives is not installed or is not operating properly. While the event can still be completed, the quality of training is degraded.

c. NMC. The device lacks the capability to complete the event due to a critical subsystem or capability being inoperative or not installed. A simulator will be considered NMC if its configuration is greater than 3 months out of date as compared with the current aircraft/system configuration.

2. Completion of an event in a PMC simulator shall be noted on the ATF with a description of the impact to training. Commanding Officers shall be notified of all scheduled events in NMC simulators. Each commanding officer should notify DC/Aviation APW-71/APC [Info appropriate MCI/MARCORBASE, CG TECOM ATB and PMA-205(MARFED)] by DMS message (via the applicable chain of command) when NMC simulators due to aircraft configuration changes occur for greater than six months or when in the commanding officer's judgment the NMC rate has had an adverse effect on the squadron's ability to train.

3. Simulator MESM Application. The matrix below illustrates how the absence of a particular simulator subsystem or capability affects simulator MC status for each training event in this Manual. All simulator events will be completed in a FMC or PMC simulator as determined by the MESM. Completion of an event in a PMC simulator shall be noted on the ATF with a description of the impact to training. Under no circumstances will an event be completed in a device determined to be NMC for that event without the approval of the commanding officer.

4. Simulator event briefs shall be identical, both procedurally and in content, to aircraft/system event briefs. The length of the brief should be based upon

the mission to be flown/conducted and content to be covered, and should not be forced to fit into the standard simulator briefing period.

5. If the simulator is not available, simulator periods may be flown in the aircraft or conducted on the system.

6. Scheduling. The time between a simulator event and the corresponding aircraft/system event should be minimized to the maximum extent possible.

AH-1 SIMULATOR MISSION ESSENTIAL SUBSYSTEM MATRIX (MESM) *(List simulator model)*		
Failed Sub-System	***NMC for:***	***PMC for:***
Front Seat Motion	*Any event except* *SFAM 1100, 1101,* *SSWD 1601, 1605,* *SSWD 2400, SOAS 2600*	*SFAM 1100, 1101* *SSWD 1600, 1605* *SSWD 2400, SOAS 2600* *SFCLP 4300*
Rear Seat Motion	*Any event except* *SFAM 1100,* *SSWD 1600, 1605, SINST 1205* *SSWD 2400, SOAS 2600*	*SFCLP 4300*
Aural	*SFAM 1100, 1101, 1104, 1110, 1140,* *CCX 1800, SFCLP 2100, SEW 3100,* *SANSQ 3100, SBIP 5100, 5103,* *DESG 6100, 6102,6103*	*Any event*
Visual F/S	*All F/S & OS events*	
Visual R/S	*All R/S & OS events* *except SINST*	*SINST 1200, 1201, 1202, 1205* *SBIP 5103*
NVG Visual	*SFAM 1114, SFCLP 2100, 4300* *SANSQ 310, 313*	*SSWD 2400, 2403, SEW 3100*
ANVIS HUD		*SFAM 1140, SFCLP 2100*
Basic Moving Models	*SFAM 1100, SINST 1250* *SFCLP 4300 -- L Class Amphib*	*SSWD 1600, 1602, 1065,* *SOAS 2601, SEW 3100, SANSQ 3130,* *SOAS 4104, SWTO 5120, 5210*
FLIR/MFD[1] (front)	*SFAM 1100*	*SSWD 1600, 1650, 2410,* *SOAS 2601, SEW 3100, SANSQ 3130,* *SOAS 4104, SWTO 5200, 5201*
FLIR/MFD repeater at IOS	*SSWD 1600, 1605, 2400, 2403* *SOAS 2600, SEW 3100, SANSQ 3103,* *SOAS 4104, SWTO 5120, 5121*	

18. NATOPS Evaluation POI and Syllabus Format Example

a. NATOPS Evaluation POIs. Marine Aviation flight communities, through their respective Model Managers, shall implement community standardized NATOPS POIs for NATOPS Evaluations.

(1) POI Content. NATOPS POIs shall ensure aircrew are evaluated through strict adherence to NATOPS procedures. NATOPS evaluations are intended to measure the degree of procedural compliance, the health of the NATOPS program, and the level of proficiency of the individual and unit.

(2) NATOPS academic and dynamic events shall be delineated in the 6000 phase.

(3) NATOPS evaluations allow a close assessment of the aviator, NFO, or aircrewman and are the building block from which tactical proficiency and weapons employment expertise is derived.

(4) NATOPS evaluations are not only the assessment of the individual and unit, but should also be utilized as a learning event in which to teach, instruct and convey the advanced knowledge and experience of the evaluator.

X. FA-18 NATOPS Evaluation POI

a. Purpose. To evaluate the airman's knowledge of aircraft systems, performance limitations, emergency procedures, and flight and ground operations.

b. General

(1) NATOPS Evaluators/Instructors shall conduct the NATOPS evaluation in accordance with OPNAVINST 3710.7 Series and other applicable directives, instructions, and orders.

(2) The NATOPS Evaluator shall utilize the NATOPS Model Manager generated NATOPS Aviation Training Form (ATF) and the evaluation metrics required for the accomplishment and performance of the standardized criterion to determine whether the aircrewman completed the sortie. Prior to the Oral Examination, the NATOPS Evaluator shall review the Evaluee's NATOPS Monthly emergency Procedures examinations and Simulator/Cockpit-Cabin Drills located in the APR for the previous twelve (12) months and previous NATOPS evaluations. At the discretion of the squadron commanding officer, a letter designating the pilot as NATOPS qualified shall be placed in the NATOPS jacket and APR.

(3) NATOPS Evaluees shall complete and have a graded Open Book, Closed Book, and Oral Examination prior to the commencement of the actual NATOPS evaluation event.

c. NATOPS Training. All requirements delineated in the matrix below shall be completed/graded prior to the evaluation event.

SELF PACED READINGS		DATE COMP
USMC F/A-18 ADMIN SOP		
F/A-18 NATOPS Flight Manual		
OPNAVINST 3710.7 Series		
NAVAIR 00-80T-112		
REQUIRED Evaluation Events	**DATE COMP/GRADED**	**INSTRUCTOR**
FA-18 Open Book Examination		
FA-18 Closed Book Examination		
FA-18 Oral Examination		
FA-18 Evaluation (Simulator/ Aircraft)		

d. *Academic Evaluation Events. X events, X.X hours.*

NTPS-6XXX 3.0 Open Book NATOPS Examination

Goal. The Open Book Examination shall consist of, but not be limited to the question bank. The purpose of the open book examination portion of the written examination is to evaluate the airman's knowledge of the appropriate publications and the aircraft.

Performance Standard
Achieve a minimum grade of qualified on the Open Book examination.

NTPS-6XXX 1.0 Closed Book NATOPS Examination

Goal. The Closed Book Examination shall be limited to the question bank. The purpose of the open book examination portion of the written examination is to evaluate the airman's knowledge of the concerning normal/emergency procedures and aircraft limitations.

Performance Standard
Achieve a minimum grade of qualified on the Closed Book examination.

NTPS-6XXX 3.0 Oral NATOPS Examination

Goal. The Oral shall consist of, but not be limited to the question bank. The instructor/evaluator may draw upon their experience to propose questions of a direct and positive manner and in no way be opinionated to evaluate the airman's knowledge of the concerning normal/emergency procedures, aircraft limitations, and performance.

Performance Standard
Achieve a minimum grade of qualified on the Oral examination.

e. *Flight and/or Simulator NATOPS Evaluation Event. X events, X.X hours.*

NTPS-6XXX 3.0 E FA-18A/C/D S/A

Goal. Conduct an objective evaluation of the airman's knowledge of mission planning, briefing, normal operating procedures (flight and ground), crew resource management, aircraft systems, performance criteria, emergency procedures, and debriefing. The focus is on normal and emergency procedures, not tactical execution. Emphasis shall be placed on the aforementioned items with the addition of USMC Admin SOP, local course rules, local SOP addendum, and admin flight procedures. The NATOPS evaluation is intended to evaluate compliance with NATOPS procedures. The NATOPS evaluation is the means to measure the airman's efficiency in the execution of normal operating procedures and reaction to emergencies and malfunctions. The NATOPS evaluation process should be as much a learning tool and/or experience as it is an evaluation.

Requirement. Conduct NTPS-6XXX. Demonstrate comprehensive knowledge and understanding of NATOPS, Admin SOP, TACSOP, and local course rules. The evaluee shall accomplish the following criterion:

Brief/Debrief IAW NATOPS, USMC Admin and TAC SOP.

Upon successful completion of this event, the evaluator shall log the appropriate training code for tracking purposes.